THE SARS COMMISSION

INTERIM REPORT

SARS AND PUBLIC HEALTH IN ONTARIO

The Honourable Mr. Justice Archie Campbell

Commissioner

April 15, 2004

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Dedication

This report is dedicated to those who died from SARS, those who suffered from it, those who fought the disease, and all those affected by it.

Letter of Transmittal

**COMMISSION TO INVESTIGATE
THE INTRODUCTION AND
SPREAD OF SARS IN ONTARIO**

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Commissioner

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April 15, 2004

The Honourable George Smitherman MPP
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Dear Mr. Minister:

Pursuant to the terms of reference, letter of appointment, and Order-in-Council establishing the independent SARS Commission I submit the attached interim report.

Yours truly,

Archie Campbell
Commissioner

EXECUTIVE SUMMARY

A BROKEN SYSTEM

SARS showed that Ontario's public health system is broken and needs to be fixed. Despite the extraordinary efforts of many dedicated individuals and the strength of many local public health units, the overall system proved woefully inadequate. SARS showed Ontario's central public health system to be unprepared, fragmented, poorly led, uncoordinated, inadequately resourced, professionally impoverished, and generally incapable of discharging its mandate.

The SARS crisis exposed deep fault lines in the structure and capacity of Ontario's public health system. Having regard to these problems, Ontario was fortunate that SARS was ultimately contained without widespread community transmission or further hospital spread, sickness and death. SARS was contained only by the heroic efforts of dedicated front line health care and public health workers and the assistance of extraordinary managers and medical advisors. They did so with little assistance from the central provincial public health system that should have been there to help them.

These problems need urgently to be fixed.

REASONS FOR INTERIM REPORT

The work of this Commission will continue until I am satisfied that the necessary evidence has been reviewed. Because government decisions about fundamental changes in the public health system are clearly imminent, this interim report on the public health lessons of SARS is being issued at this time instead of awaiting the final report. This interim report is based on the evidence examined to date and is not intended as the last word on this aspect of the Commission's investigation.

The fact that the Commission must address public health renewal on an interim basis is not to say it is more important than any other urgent issue such as the safety and protection of health care workers. It is simply a case of timing. The Commission continues to interview health care workers, SARS victims, the families of those who died, and those who fought the outbreak. Their story and the story of SARS will be told in the Commission's final report.

For an update on the Commission's ongoing work see Appendix A.

TWENTY-ONE PRINCIPLES FOR REFORM

The lessons of SARS yield 21 principles for public health reform:

1. Public health in Ontario requires a new mandate, new leadership, and new resources.

2. Ontario public health requires renewal according to the principles recommended in the Naylor, Kirby, and interim Walker reports.

3. Protection against infectious disease requires central province-wide accountability, direction, and control.

4. Safe water, safe food, and protection against infectious disease should be the first priorities of Ontario's public health system.

5. Emergency planning and preparedness are required, along with public health infrastructure improvements, to protect against the next outbreak of infectious disease.

6. Local Medical Officers of Health and public health units, the backbone of Ontario public health, require in any reform process a strong focus of attention, support, consultation and resources.

7. Reviews are necessary to determine if municipalities should have a significant role in public health protection, or whether accountability, authority, and funding should be fully uploaded to the province.

8. If local Boards of Health are retained, the province should streamline the processes of provincial leadership and direction to ensure that local boards comply with the full programme requirements established by the province for infectious disease protection.

9. So long as the local Boards of Health remain in place: The local Medical Officer of Health should have full chief executive officer authority for local public health services and be accountable to the local board. Section 67 of the *Health Protection and Promotion Act* should be enforced, if necessary amended, to ensure that personnel and machinery required to deliver public health protection are not buried in the municipal bureaucracy.

10. Public health protection funding against infectious disease should be uploaded so that the province pays at least 75 per cent and local municipalities pay 25 per cent or less.

11. A transparent system authorized by law should be used to clarify and regularize the roles of Chief Medical Officer of Health and the local Medical Officer of Health in deciding whether a particular case should be designated a reportable disease.

12. The Chief Medical Officer of Health, while accountable to the Minister of Health, requires the independent duty and authority to communicate directly with the public and the Legislative Assembly whenever he or she deems necessary.

13. The operational powers of the Minister of Health under the *Health Protection and Promotion Act* should be removed and assigned to the Chief Medical Officer of Health.

14. The Chief Medical Officer of Health should have operational independence from government in respect of public health decisions during an infectious disease outbreak. Such independence should be supported by a transparent system requiring that any Ministerial recommendations be in writing and publicly available.

15. The local Medical Officer of Health requires independence, matching that of the Chief Medical Officer of Health, to speak out and to manage infectious outbreaks.

16. The operational powers of the local Medical Officer of Health should be reassigned to the Chief Medical Officer of Health, to be exercised locally by the Medical Officer of Health subject to the direction of the Chief Medical Officer of Health.

17. An Ontario Centre for Disease Control should be created as support for the Chief Medical Officer of Health and independent of the Ministry of Health. It should have a critical mass of public health expertise, strong academic links, and central laboratory capacity.

18. Public health requires strong links with hospitals and other health care facilities and the establishment, where necessary, of an authoritative hospital presence in relation to nosocomial infections. The respective accountability, roles and responsibilities of public health care and health care institutions in respect of infectious outbreaks should be clarified.

19. Ontario and Canada must avoid bickering and must create strong public health links based on cooperation rather than competition to avoid the pitfalls of federal overreaching and provincial distrust.

20. The Ontario government must commit itself to provide the necessary resources and leadership for effective public health protection against infectious disease.

21. Public health requires strong links with nurses, doctors and other health care workers and their unions and professional organizations.

It is expected that the final report of the Walker expert panel will recommend a detailed prescriptive blueprint for many of the operational details of a renewed system. Such operational details are beyond the scope of this interim report. Some of the issues that will drive these details are discussed in the report.

HINDSIGHT

Everything said in this report is said with the benefit of 20-20 hindsight, a gift not available to those who fought SARS or those who designed the systems that proved inadequate in face of a new and unknown disease.

It is important to distinguish between the flaws of public health systems and the skill and dedication of those who worked within them. To demonstrate the weakness of Ontario's public health infrastructure is not to criticize the performance of those who worked within systems that proved inadequate in hindsight. The Commission recognizes the skill and dedication of so many individuals in the Ontario public health system and those volunteers from Ontario and elsewhere who worked beyond the call of duty. Twenty-hour days were common. They faced enormous workloads and pressures in their tireless fight, in a rapidly changing environment, against a deadly and mysterious disease.

It is my hope that those who worked on the front lines and in public health in Ontario during SARS will accept that I have approached the flaws of the system with the utmost respect for those who gave their all to protect the public. We should be humbled by their efforts.

In this interim report I have attempted to avoid, and I invite the reader to avoid, the unfair use of hindsight to judge the actions of those who struggled so valiantly in the fog of battle against the unknown and deadly virus that is SARS.

WHAT WENT RIGHT

The litany of problems listed below reflect weaknesses in central public health systems. These weaknesses hampered the work of the remarkable individuals who eventually contained SARS. The problems of SARS were systemic problems, not people problems. Despite the deep flaws in the system, it was supported by people of extraordinary commitment.

The strength of Ontario's response lay in the work of the people who stepped up and fought SARS. What went right, in a system where so much went wrong, is their dedication. It cannot, however, be said that things went right because SARS was eventually contained. It does nothing for those who suffered from SARS or lost loved ones to SARS to say that the disease which caused their suffering was ultimately contained. For the families of those who died from SARS and for all those who suffered from it, little if anything went right. This enormous toll of suffering requires that the Ontario government commit itself to rectify the deep problems in the public health system disclosed by SARS.

THE DECLINE OF PUBLIC HEALTH

The decline of public health protection in Ontario began decades before SARS. No government and no political party is immune from responsibility for its neglect.

It is troubling that Ontario ignored so many public health wake-up calls from Mr. Justice Krever in the blood inquiry, Mr. Justice O'Connor in the Walkerton inquiry, from the Provincial Auditor, from the West Nile experience, from pandemic flu planners and others. Despite many alarm calls about the urgent need to improve public health capacity, despite all the reports emphasizing the problem, the decline of Ontario's public health capacity received little attention until SARS. SARS was the final, tragic wake-up call. To ignore it is to endanger the lives and the health of everyone in Ontario.

LACK OF PREPAREDNESS: THE PANDEMIC FLU EXAMPLE

When SARS hit, Ontario had no pandemic influenza plan. Although SARS and flu are different, the lack of a pandemic flu plan showed that Ontario was unprepared to deal with any major outbreak of infectious disease.

Had a pandemic flu plan been in place before SARS, Ontario would have been much better prepared to deal with the outbreak. The failure to heed warnings about the need for a provincial pandemic flu plan, and the failure to put such a plan in place before SARS, reflects a lack of provincial public health leadership and preparedness.

LACK OF TRANSPARENCY

Because there was no existing plan in place for a public health emergency like SARS, systems had to be designed from scratch. Ad hoc organizations like the epidemiological unit (Epi Unit) and the Science Committee were cobbled together. Procedures and protocols were rushed into place including systems like the case review, or adjudication process, that grew up to determine whether a particular case should be reported as SARS. Because SARS was such a difficult disease to diagnose, there were no reliable lab tests and knowledge about the disease was rapidly evolving, there were disagreements from time to time as to whether a particular case was SARS.

Although well meaning, this system lacked clear lines of accountability and in particular it lacked transparency.

To avoid this problem in the future the Commission recommends that the respective roles of the Chief Medical Officer of Health and the local Medical Officers of Health, in deciding whether a particular case should be designated as a reportable disease, should be clarified and regularized in a transparent system authorized by law.

LACK OF PROVINCIAL PUBLIC HEALTH LEADERSHIP

Few worked harder during SARS than Dr. Colin D'Cunha, the Chief Medical Officer of Health for Ontario and Director of the Public Health Branch in the Ontario Ministry of Health and Long-Term Care. He demonstrated throughout the crisis a strong commitment to his belief of what was in the public interest. Dr. D'Cunha is a dedicated professional who has devoted his career to the advancement of public health. For the brief reasons set out in the report Dr. D'Cunha turned out in hindsight to be the wrong man in the wrong place at the wrong time.

While it may be due to misunderstandings or a simple difficulty on the part of Dr. D'Cunha to communicate effectively, there is a strong consensus on the part of those colleagues who worked with him during the crisis that his highest and best public calling at this time is in an area of public health other than direct programme leadership. This general concern has undoubtedly been reflected in the government's decision to provide him with other opportunities within his area of expertise.

Because Dr. D'Cunha no longer holds the office of Chief Medical Officer of Health it might be asked why it is necessary in this interim report to deal with his leadership during SARS. The answer is that the public has a right to know what happened during SARS and that obliges me to make whatever findings I am taken to by the evidence. The story of what happened during SARS cannot be told without some reference to the difficulties that arose in respect of Dr. D'Cunha's leadership.

I cannot fairly on the evidence before me make any finding of misconduct or wrongdoing by Dr. D'Cunha. The underlying problems that arose during SARS were systemic problems, not people problems. Because the underlying problems were about inadequate systems and not about Dr. D'Cunha, it would be unfair to blame him or make him a scapegoat for the things that went wrong.

It is impossible to say, in the end result, that Dr. D'Cunha's difficulties made any ultimate difference in the handling of the crisis. Although his colleagues were frustrated by his approach to things, the crisis was to a large extent managed around him. It is hard to say that the overall result of the SARS crisis would have been different with someone else at the helm.

LACK OF PERCEIVED INDEPENDENCE

The Commission on the evidence examined thus far has found no evidence of political interference with public health decisions during the SARS crisis. There is, however, a perception among many who worked in the crisis that politics were at work in some of the public health decisions. Whatever the ultimate finding may be once the investigation is completed, the perception of political independence is equally important. A public health system must ensure public confidence that public health decisions during an outbreak are free from political motivation. The public must be assured that if there is a public health hazard the Chief Medical Officer of Health will be able to tell the public about it without going through a political filter. Visible safeguards to ensure the independence of the Chief Medical Officer of Health were absent during SARS. Machinery must be put in place to ensure the actual and apparent independence of the Chief Medical Officer of Health in decisions around outbreak management and his or her ability, when necessary, to communicate directly with the public.

LACK OF PUBLIC HEALTH COMMUNICATION STRATEGY

The problems of public communication during SARS are addressed thoughtfully in the Naylor Report and the Walker Interim Report. The Commission endorses their findings and their recommendations for the development of coherent public communication strategies for public health emergencies.

There is no easy answer to the public health communications problems that arose during SARS. On the one hand, if there are too many uncoordinated official spokespeople the public ends up with a series of confusing mixed messages. On the other hand, as Mr. Tony Clement the Minister of Health during SARS pointed out to the Commission, any attempt to manage the news by stifling important sources of information will not only fail but will also lead to a loss of public confidence and a feeling among the public that they are not getting the straight goods or the whole story. What is needed is a pre-planned public health communications strategy that avoids either of these extremes.

POOR COORDINATION WITH FEDERAL GOVERNMENT

Problems with the collection, analysis and sharing of data beset the effort to combat SARS. While many factors contributed to this, strained relations between the three levels of government did not help matters.

The lack of federal-provincial cooperation was a serious problem during SARS. This lack of cooperation prevented the timely transmission from the Ontario Public Health Branch of vital SARS information needed by Ottawa to fulfill its national and international obligations. Although recollections differ as to the responsibility for this lack of cooperation, the underlying problems were the lack of pre-existing protocols, agreements, and other machinery to ensure the seamless flow of necessary information and analysis, combined with a possible lack of collaborative spirit in some aspects of the Ontario response.

The inherent tensions between the federal and provincial governments must be overcome by a spirit of cooperation around infectious disease surveillance and coupled with the necessary machinery to ensure in advance that the vital information will flow without delay. It is clearly incumbent on both levels of government to ensure that the breakdown that occurred during SARS does not happen again.

A DYSFUNCTIONAL PUBLIC HEALTH BRANCH

The Commission has heard consistent reports that the Public Health Branch of the Ministry of Health had become dysfunctional both internally and in terms of its relationships with the local public health units.

A lack of respect for the Public Health Branch was evident in the responses from outside Ontario and from elements of the Ontario public health system at the local level. When

SARS hit, leadership was not forthcoming from a Public Health Branch that turned out to be dysfunctional.

LACK OF CENTRAL PUBLIC HEALTH COORDINATION

Under the *Health Protection and Promotion Act*, local Medical Officers of Health were responsible for the local response to SARS. It was to the province however, to the Public Health Branch in the Ministry of Health, that the local public health units looked for guidance. Unfortunately many Medical Officers of Health felt there was no coordinated effort at the Public Health Branch to facilitate the SARS response at the local level. For many in the field it seemed as though the Branch was a silo, disconnected from the field, rather than a partner or a resource.

Many local Medical Officers of Health felt abandoned during SARS, devoid of support and guidance. The Branch's failure to co-ordinate and guide the local health units was already a big problem before SARS. It turned out to be a harbinger of the problems that arose during SARS.

LACK OF CENTRAL EXPERTISE

The outbreak was managed, of necessity, around the Public Health Branch of the Ministry of Health and Long-Term Care rather than through it. The critical mass of professional expertise one would expect in a crucial branch of government in a province the size of Ontario simply did not exist, either in the number of experts or their depth of experience. Key operational groups had to be put together on the run and individual experts had to be recruited from the field to fill this void. Machinery such as the Science Committee and the Epi Unit were run on almost a volunteer drop-in basis because there was no depth of expertise in the Branch itself.

SARS demonstrated that our most valuable public health resources are human resources and that Ontario lacked a critical mass of expertise at the provincial level. It is crucial to the success of any public health reform initiatives in Ontario that there be a high level of expertise at both the local and central levels of public health. Ontario cannot continue to rely on the goodwill and volunteerism of others to protect us during an outbreak. Many of those who came forward to work at the provincial level during SARS were disheartened by the problems they saw and a few expressed doubts whether they would be willing to come forward again, particularly if the problems are not addressed. Examples abound of centres of excellence for disease control: British Columbia, Quebec, and Atlanta, among others. Ontario needs to learn from their example. Without a critical mass of the right professionals public health reform, no matter how well-reasoned and well-resourced, has no chance of success.

NO ESTABLISHED SCIENTIFIC BACKUP

In March 2003, the Public Health Branch in Ontario had neither the capacity nor the expertise to handle an outbreak of the magnitude of SARS. Neither was there any provincial plan to rapidly bring together the necessary experts to provide scientific advice to those managing the outbreak. One outside expert, brought in to help manage the crisis, noted that Ontario simply didn't have the machinery, people or the leadership at the central level:

> It was abundantly clear to everyone who sat in on teleconferences that Ontario was scrambling, didn't have the infection control expertise, at least the amount of expertise. There were superb infection control people there … it's clear they were unable to pull together the data that was required for them and us to try to understand what's going on. It was abundantly clear that there was no obvious concerted leadership of the outbreak at least as we could see … It was obvious to all of us that Ontario was in substantial trouble.

Consequently, the Ministry of Health had to turn to experts outside of government for advice and direction. While it is not unusual that outside experts would be consulted during an outbreak, the lack of planning meant that the core expert groups had to be thrown together in haste without adequate planning or organization.

LACK OF LABORATORY CAPACITY

Before SARS, concerns had been raised about the capacity of the Ontario Central Public Health Laboratory (provincial laboratory). Despite these warnings, it was not prepared to deal with an outbreak of this magnitude. There were only two medical microbiologists in the laboratory, who were responsible for the entire province.

To make it worse, the Ministry of Health and Long-Term Care had, in the fall of 2001, had laid off its PhD level scientists at the provincial laboratory. These scientists were engaged in the diagnosis and surveillance of new and emerging infections as well as research and development.

Within government, there seemed to be a complete lack of understanding of the importance of the work done by scientists at the provincial laboratory. At the time of the layoffs, a Ministry of Health spokesman was quoted as saying:

> Do we want five people sitting around waiting for work to arrive? It would be highly unlikely that we would find a new organism in Ontario.

It is unnecessary, in light of SARS, to bring the irony of this statement to the attention of the reader. Less than two years later, SARS struck Ontario. The provincial laboratory did not have the capacity to deal with SARS.

Despite earlier warnings, the Ontario Central Public Health Laboratory proved inadequate during SARS. It is essential that the provincial laboratory be revitalized with the necessary physical and human resources.

NO PROVINCIAL EPIDEMIOLOGICAL UNIT

When SARS hit Ontario, the Ministry of Health's Public Health Branch was totally unprepared to deal with an outbreak of this nature. To start with, it had no functioning epidemiological unit (Epi Unit).

The Science Committee needed epidemiological data about the transmission of the disease and whether control measures were effective. It needed answers to a number of vital questions: How was the outbreak progressing? What was the incubation period? How long were people infectious? What were the risks in hospital?

Although an Epi Unit was cobbled together as the outbreak unfolded, its work was hampered by the lack of planning and support systems.

It was a major failure of Ontario's public health system that no such unit was in place when SARS struck. The development of fully resourced epidemiological capacity is vital to protect Ontario against outbreaks of infectious disease. In the absence of major reform, Ontario may not be able in a future outbreak to draw on the extraordinary volunteer resources that helped so much in the spring of 2003.

INADEQUATE INFECTIOUS DISEASE INFORMATION SYSTEMS

The fight against SARS was hampered by the lack of an effective reportable disease information system. When SARS hit Ontario neither the provincial Public Health Branch nor the local public health units had any information system capable of handling a disease like SARS. The existing system, known as Reportable Disease Information System, or RDIS, was disease-specific and not flexible enough to handle new diseases.

Until the Epi Unit was up and running, there was no way to coordinate the work of local public health units into a common reporting structure. This delay turned out to be a critical problem. By the time the Epi Unit was established, individual health units were married to their own individual methods of collecting and reporting data. As a result, they were unable and disinclined to change their systems mid-stream, despite problems created by the diverse manner in which the data was being collected and reported.

Because of systemic weaknesses, the Toronto Public Health unit, which had the majority of the SARS cases, relied on a paper-based system of case tracking. This nightmarish system generated cardboard boxes spilling over with paper, all of which had to be collated and analyzed by hand.

The Commission endorses the specific recommendations in the Naylor Report and the Walker Interim Report to address the deficiencies in the federal and Ontario infectious disease information systems.

Should SARS or some other infectious disease hit Ontario tomorrow, the province still has no information system, accessible by all health units, capable of handling an outbreak. The first unheeded wake-up call was the Provincial Auditor's report in 1997. The second unheeded wake-up call was West Nile. If it takes Ontario as long to respond to SARS as it did to those earlier wake-up calls, the province will be in serious trouble when the next disease strikes.

OVERWHELMING AND DISORGANIZED INFORMATION DEMANDS

The problem of information flow was not restricted to the lack of the necessary information technology systems. Confusion, duplication, and apparent competition prevailed in the work of those in the central apparatus who sought information from local public health units and hospitals. These unfocused demands consumed valuable time of public health and hospital staff, distracted them from urgent tasks at hand, and impaired their ability to get on with the work of fighting the disease.

SARS caught Ontario with no organized system for the transmission of case information to those who needed it to fight the outbreak. There was no order or logic in the frenzied, disorganized, overlapping, repetitious and multiple demands for information from hospitals and local public health units. Requests would go out simultaneously to many people for the same piece of information. The work of front line responders in hospitals and health units was seriously impaired by this constant and unnecessary harassment.

INADEQUATE DATA

The data produced by the jerry-built system through the frenzy of information demands often proved to be inadequate. Accurate data of high quality was vital to the experts on the Science Committee who had to provide evidence- and science-based direction for the management of SARS. Because so much about the disease was unknown, case-specific information was vital and sound decisions could not be made without adequate data of the necessary quality.

The Science Committee never reached the point where it received adequate data in a timely manner, including information about contacts of those with SARS. Consequently, it was difficult to judge the effectiveness of control measures such as quarantine.

The Epi Unit and the local health units were often unable to provide adequate and timely data. While there is disagreement among those involved as to the amount of data being provided, what is clear is that the experts and officials who needed the data did not get what they needed when they needed it. The information systems and support structures were simply not in place. In the absence of this necessary machinery, not even the hardest work and greatest expertise of those who came forward to staff the Epi Unit and the Science Committee could overcome the obstacles

DUPLICATION OF CENTRAL DATA SYSTEMS

Because there was no standard information system for the Public Health Branch and all the local public health units, each individual health unit developed their own data collection system during SARS. The lack of a single, effective, accessible information system, combined with a constant, intense demand for information from a number of different people and groups, resulted in chaos.

Duplicate data systems sprung up at the Ministry of Health. For example, one group in the Ministry ran a system intended to track the situation in hospitals. This group collected data separate from the Epi Unit, but the numbers reported by this Ministry group often differed widely from the numbers reported by the Epi Unit.

The proliferation of data systems, and the confusion and burdens it created, was an inevitable consequence of Ontario's preparedness for a major outbreak of infectious diseases.

Failure to prioritize public health emergency preparedness, and to devise one central system for the collection and sharing of infectious disease data was a major problem during SARS. Although work has been done since SARS to improve the situation, there is no such system now in place to protect us from a future outbreak. Unless this problem is addressed, duplicate systems will spring up again as people scramble to devise their own information systems in the absence of systems put in place before the next outbreak hits.

BLOCKAGES OF VITAL INFORMATION

There was a perception among many who fought SARS that the flow of vital information to those who urgently needed it was being blocked or delayed for no good reason.

What is striking is that the various groups appear honestly to believe that they communicated the information to each other. Yet clearly there were significant gaps in the transfer of information between Toronto Public Health and the province, between the provincial Epi Unit and the Science Committee, and between Ontario and the Federal government. It is impossible to determine the precise source of the data blockages.

It does not matter whose perception, in the fog of battle against the disease, was correct. The bottom line is that the lack of clarity around the flow of communication and the reporting structure, the absence of a pre-existing epidemiological unit coordinated with the local health units and the absence of clear public health leadership above the Epi Unit provided an environment in which the crucial elements of the fight against SARS were disconnected from each other. Despite the best efforts of individuals attached to all of the groups involved, they simply could not connect effectively.

LEGAL CONFUSION

The fight against SARS was marked by the lack of clarity of existing laws that impacted on the public health system. Although the Commission cannot at this interim stage make specific recommendations for legislative reform in Ontario, a few things should be said about the general need for work in this area. Areas of concern include the following:

- Who legally was in charge of the outbreak?
- Who had the ultimate responsibility for the classification of a case: the local jurisdiction or the province?
- What was the legal authority for issuing directives to hospitals?
- What were the consequences of not following those directives?
- What specific information had to be transmitted, by whom, when and to whom?
- To what extent could public officials and private experts share data and for what purpose?
- Who was obliged to notify relatives that a family member was classified as a suspect or probable case?
- Did privacy rights prevent the sharing of information necessary to fight the outbreak?

While protection of patient confidentiality is a key consideration in any data sharing agreement or legislation, it should not in the future hinder the vital communication of data to the extent it did during SARS. Notwithstanding the strong privacy concern demonstrated by many of those who fought the outbreak, a number of families affected by SARS reported that they felt their privacy had nonetheless been violated because personally identifying information somehow made it into the media. It is ironic that although privacy concerns restricted the flow of vital information between agencies fighting the outbreak, they were not always effective to keep personal information from the media.

Whatever the precise path of legislative reform, privacy, while vital, should not impede the necessary sharing between agencies and governments of information required to protect the public against an outbreak of infectious disease.

The Commission during the course of its investigation will continue to address issues around the need for legislative changes identified in the lessons learned from SARS.

PUBLIC HEALTH LINKS WITH HOSPITALS

SARS was largely a hospital spread infection. Although there was some spread in households and doctors offices, and a limited element of community spread, most of the transmission took place in hospitals.

There are significant weaknesses in the links between public health and hospitals and there is lack of clarity as to the respective accountability and authority of public health and hospitals in a hospital-based outbreak.

Public health should have strong links with hospitals and establish where necessary an authoritative hospital presence in relation to nosocomial infection. The respective accountability, roles and responsibilities of public health and health care institutions in respect of infectious outbreaks should be clarified.

PUBLIC HEALTH LINKS WITH NURSES, DOCTORS AND OTHERS

Public health links with nurses, doctors, other health care workers and their unions and professional organizations were often ineffective during SARS.

This section of the report illustrates specific problems that arose from this general failure and points to the need for a better system to ensure that public health develops better links and communication systems with the key participants in the health care system.

LACK OF PUBLIC HEALTH SURGE CAPACITY: THE TORONTO EXAMPLE

The sudden demands imposed by SARS on local public health units were overwhelming. The hardest hit jurisdiction was Toronto, where the cases snowballed with each passing day of the outbreak. While the same was true of other public health units, Toronto is selected as an example because it had the greatest number of cases.

Despite the reassignment of public health staff from other jobs, and despite the influx of workers from other health units to help out, Toronto public health was at times overwhelmed by the staggering workload which included:

- Approximately 2,000 case investigations. Each took an average of nine hours to complete.
- More than 23,000 people identified as contacts.
- Of these, 13,374 placed in quarantine.
- More than 200 staff working on the SARS hotline.
- Over 300,000 calls received on the hotline.

- On the highest single day, 47,567 calls.

Despite the best efforts of so many, the systems for redeployment proved inadequate. SARS demonstrated the need to create surge capacity by planning in advance so that every available worker can be redeployed where necessary.

THE CASE OF THE FEDERAL FIELD EPIDEMIOLOGISTS

The federal government sent a number of Health Canada employees to work in the field to help with containment efforts. In the early days of the outbreak they sent three federal field epidemiologists to Toronto, often referred to as the field epi's, who brought a badly needed level of expertise to the provincial response. Unfortunately, the lack of clarity concerning their deployment and, from time to time, the tasks that they were asked to perform led to problems and ultimately contributed to the decision by Health Canada to pull them back from Ontario.

The case of the federal field epidemiologists demonstrates many of the underlying problems of Ontario's SARS response noted above: poor coordination among levels of government, poor coordination of Ontario's public health response, and above all a lack of any advance plan for outbreak management.

IMPROVEMENTS SINCE SARS

This section of the report describes the steps taken to fix the problems disclosed by SARS.

These pending and proposed improvements exemplify an obvious present desire to fix the public health problems revealed by SARS. It is beyond the Commission's mandate to evaluate or monitor these initiatives. The government's efforts to ensure the province will not again be confronted by the same problems that arose during SARS will be effective only if it dedicates adequate funds and makes a long-term commitment to reform of our public health protection systems. As in most areas of human endeavour, actions speak louder than words. Only time will tell whether the present commitment will be sustained to the extent necessary to protect Ontario adequately against infectious disease.

NAYLOR, KIRBY, WALKER

These three reports share a common vision for the renewal of our public health systems through increased resources, better federal-provincial and inter-agency cooperation, and system improvements. They bear close study and great consideration. Their methodology and approach are sound and their recommendations are solidly based in their respective expertise. Based on the evidence it has seen, the Commission endorses the major findings and recommendations of all three studies.

FEDERAL-PROVINCIAL COOPERATION

Too many good ideas in this country have been destroyed by mindless federal-provincial infighting. The most noble and appealing proposals for reform falter so often in Canada simply because of the inherent bureaucratic and political mistrust between the two levels of government. If a greater spirit of federal-provincial cooperation is not forthcoming in respect of public health protection, Ontario and the rest of Canada will be at greater risk from infectious disease and will look like fools in the international community. While there are hopeful signs that more cooperation will be forthcoming, it will take hard work from both levels of government to overcome the lack of coordination demonstrated during SARS.

Ontario and Canada must avoid bickering and must create strong public health links based on cooperation rather than competition, avoiding the pitfalls of federal overreaching and provincial distrust.

INDEPENDENCE AND ACCOUNTABILITY

There is a growing consensus that a modern public health system needs an element of independence from politics in relation to infectious disease surveillance, safe food and safe water, and in the management of infectious outbreaks.

Whatever independence may be required by the Chief Medical Officer of Health for public health decisions during an outbreak and for the right to speak out publicly whenever necessary, he or she should remain accountable to the government for overall public health policy and direction and for the expenditure of public funds.

The proposed power to report directly to the public, combined with independence in relation to the management of infectious outbreaks, provides a significant measure of independence to the Chief Medical Officer of Health. It ensures that on important public health issues the Chief Medical Officer of Health cannot be muzzled and that the public can get a direct sense of emerging public health problems without passing through any political filters. It ensures both the reality and the public perception that the management of infectious disease outbreaks will be based on public health principles and not on politics.

The Commission therefore recommends:

- Subject to the guarantees of independence set out below, The Chief Medical Officer of Health should retain a position as an Assistant Deputy Minister in the Ministry of Health and Long-Term Care.

- The Chief Medical Officer of Health should be accountable to the Minister of Health with the independent duty and authority to communicate directly with the public by reports to the Legislative Assembly and the public whenever deemed necessary by the Chief Medical Officer of Health.

- The Chief Medical Officer of Health should have operational independence from government in respect of public health decisions during an infectious disease outbreak, such independence supported by a transparent system requiring that any Ministerial recommendations be in writing and publicly available.

- The local Medical Officer of Health should have the independence, matching that of the Chief Medical Officer of Health, to speak out and to manage infectious outbreaks.

THE PUBLIC HEALTH PING-PONG GAME

Public health in Ontario including protection against infectious disease is delivered primarily through 37 local Boards of Health, which are largely controlled by municipal governments. Public health funding has gone back and forth like a ping-pong ball between the province and the municipalities.

So long as the municipalities fund public health to a significant degree, public health will have to compete with other municipal funding priorities. Communicable disease control is a basic public necessity that can affect the entire province if a disease gets ahead of the controls. Infectious disease control should not have to compete for scarce tax dollars.

There is no scientific way to determine the appropriate degree of provincial funding upload for infectious disease surveillance and control. Although a case can be made for 100-per cent funding upload, the persuasive views of a number of local Medical Officers of Health suggest that it would be sensible to upload infectious disease control to a provincial contribution of at least 75 per cent.

Opinions will differ as to how the funding formula should be changed, and whether and how much co-coordinating or direct power over public health should be uploaded to the province. The one thing on which everyone will agree is that the shifting of funding and accountability back and forth between the province and the municipalities has impaired the stability of Ontario's public health system. It is time to stop the ping-pong game and to begin an era of stable public health funding relationships between the province and the municipalities.

ONE LOCAL FUNDING PROBLEM

This section of the report demonstrates in exquisite detail the problems that can arise through the present system of local funding of public health and the disinterest shown by some municipal politicians in the public interest in effective public health protection.

This story painfully reveals the importance of ensuring that funding for local health activities is not left to the mercies of any intransigent local council that fails to live up to its legal responsibilities in respect of public health protection. Basic protection against disease should not have to compete for money with potholes and hockey arenas. Even if most municipalities respect their public health obligations under the *Health Proctection and Promotion Act*, it only takes one weak link to break the chain of protection against infectious disease. Should an infectious disease outbreak spread throughout Ontario, the municipality that cannot or will not properly resource public health protection may be the weak link that affects the entire province and beyond.

THE MUNICIPALITIES' FUNDING DILEMMA

All municipalities are affected by the underlying difficulty of funding any provincial programme from the local municipal property base. SARS and West Nile showed that infectious disease protection has to be approached at a provincial level. It is anomalous to fund a provincial programme like infectious disease control from the limited municipal tax base. In a submission to the Commission, the Association of Municipalities of Ontario makes a persuasive case for the province and the municipalities to sit down together and agree on the best structure to fund infectious disease protection and the best process for getting there.

ONE LOCAL STORY: PARRY SOUND

SARS was not restricted to Toronto. This section outlines the response to SARS by the local hospital, the West Parry Sound Health Centre and the local public health unit. It demonstrates the lack of provincial public health support to a local community faced with SARS and the difficulties caused by the inability of many local public health units to attract and retain permanent a Medical Officer of Health.

If the present system of local control over public health and infectious disease is to be maintained, it is essential that machinery be put in place to ensure continuous unbroken oversight and authority in every public health unit in Ontario supported by the necessary cadre of public health professionals.

AN ONTARIO CENTRE FOR DISEASE CONTROL

A consensus has developed that some kind of separate "CDC Ontario" is needed, with strong academic links, in order to provide a critical mass of medical, public health, epidemiological, and laboratory capacity and expertise. Structural models abound for such an organization, from the British Columbia Centre for Disease Control (B.C. CDC), to the Institut national de santé publique du Québec, to the federal model proposed in the Naylor Report, and even to the United States Centres for Disease Control (CDC) itself. It is expected that the final Walker Report will make detailed and prescriptive recommendations for the structure and mandate of such an organization.

While it is beyond the scope of this interim report to address this issue in the detailed fashion expected from the final Walker report, a few observations are in order.

First, the structure of the new agency or centre, which will combine advisory and operational functions, must reflect the appropriate balance between independence and accountability whether it is established as a Crown corporation or some other form of agency insulated from direct Ministerial control.

Second, it should be an adjunct to the work of the Chief Medical Officer of Health and the local Medical Officers of Health, not a competing body. SARS showed that there are already enough autonomous players on the block who can get in each other's way if not properly coordinated. There is always a danger in introducing a semi-autonomous body into a system like public health that is accountable to the public through the government. The risk is that such a body can take on a life of its own and an ivory tower agenda of its own that does not necessarily serve the public interest it was designed to support.

Third, it must be made clear from the beginning that the agency is not an end in itself but exists only to support public health.

The success of centres such as the CDC in Atlanta and the CDC in British Columbia flows largely from a widespread recognition that these institutions house the very best of the best. The authority they have comes from their recognition as centres of excellence that can be counted on to work collaboratively with local agencies. To achieve this authority and success an Ontario Centre for Disease Control will require considerable resources and a strong commitment from government to maintain those resources. It will only work if it has the resources to attract recognized experts and to provide them with the best technology and equipment and optimal support to perform their work. It will take years to build a reputation for excellence and anything less than a 100-per-cent commitment to this long-term goal will surely result in failure.

PUBLIC HEALTH RESTRUCTURING

Whenever a system proves wanting it is tempting to blame its problems on structure and to embark on a course of reorganization, or centralization, or regionalization, or decentralization. It must be remembered that organizational charts do not solve problems. The underlying problems of public health in Ontario have to do with a lack of resources, years of neglect, and lack of governmental priority. These problems developed during the regimes of successive governments and no government or political party is immune from responsibility for the decline of public health protection. These problems will not be fixed by drawing boxes on paper around public health units and moving them into other boxes. The underlying problems will only be solved by a reversal of the neglect that has prevailed for so many years throughout the regime of so many different governments headed by all three political parties.

That being said some attention must be given to the best way to structure and organize the delivery of public health in Ontario. This section discusses the respective merits of different approaches to the restructuring of Ontario's system of public health protection.

GREATER PRIORITY FOR INFECTIOUS DISEASE CONTROL

SARS made it clear that our public health system must give greater priority to protection against infectious disease. It is equally clear, however, that our entire public health system cannot be reorganized around one disease like SARS. Many diseases produce more sickness and mortality than SARS, and the task of plugging the holes demonstrated by SARS cannot be permitted to detract public health from the task of preventing those afflictions that comprise a higher burden of disease than SARS and other infectious diseases.

While it would be wrong to downgrade the long-term importance of health promotion and population health, the immediate threat posed by any infectious outbreak requires that a dominant priority must be given to protecting the public against infectious disease. It does not disrespect the advocates of health promotion to say that the immediate demands of public safety require that public health, as its first priority, looks after its core business of protecting us from infectious disease.

The tension in public health, between priority for infectious disease control and priority for long-term population health promotion, including the prevention of chronic lifestyle diseases, is not going to go away. There is no point in arguing which is more important, because they are both important. There are however five basic reasons why protection against infectious disease should be the first basic priority of our public health system.

The first is that the threat from infectious disease is direct and immediate. The second is that an outbreak of infectious disease, if not controlled, can bring the province to its knees within days or weeks, a threat not posed by lifestyle diseases. The third is that infectious disease catches the direct attention and immediate concern of the public in a way that long-term health promotion does not. It is essential in an infectious disease outbreak that the public be satisfied that they are getting solid information from the government and that everything possible is being done to contain the disease. The fourth is that infectious disease prevention requires an immediate overall response because it moves rapidly on the ground and spreads quickly from one municipality to another and from province to province and country to country, thus engaging an international interest. The fifth is that health promotion depends largely on partnerships outside the health system between public health and local community agencies like schools and advocacy groups, allies and resources not available to infectious disease control which must stand largely on its own.

For these five reasons safe water, safe food, and protection against infectious disease should be the first priorities of Ontario's public health system.

CENTRAL CONTROL OVER HEALTH PROTECTION

An uncontrolled outbreak of infectious disease could bring the province to its knees. The province-wide consequences of a failure in infectious disease control are simply too great for the province to delegate infectious disease protection to the municipal level without effective measures of central provincial control. There is little machinery for direct central control over infectious disease programmes. The existing machinery to enforce local compliance with provincial standards is cumbersome and underused. Better machinery is needed to ensure provincial control over infectious disease surveillance and control.

During a disease outbreak the international community and organizations like the World Health Organization look for reassurance and credibility to the national and provincial level, not to the particular strength of any local public health board or the particular credibility of any local Medical Officer of Health. Viruses do not respect boundaries between municipal health units. The chain of provincial protection against the spread of infectious disease is only as strong as the weakest link in the 37 local public health units. A failure in one public health unit can spill into other public health units and impact the entire province and ultimately the entire country and the international community. When dealing with a traveling virus, concerns about local autonomy must yield to the need for effective central control.

If the *Health Protection and Promotion Act* were amended to provide that:

- The powers now assigned by law to the Medical Officer of Health are reassigned to the Chief Medical Officer of Health, and
- The powers reassigned to the Chief Medical Officer of Health shall be exercised by the Medical Officer of Health in the local region, subject to the direction of the Chief Medical Officer of Health,

it would leave to the local Medical Officers of Health a clear field to exercise the same powers they have always exercised, subject to ultimate central direction.

Under the old system, such a re-arrangement of powers might raise serious concerns of loss of autonomy on the part of the local Medical Officer of Health including the spectre of political influence from Queen's Park on local public health decisions. While concerns about local autonomy will never go away in any centralized system, the new independence of the Chief Medical Officer of Health and the Medical Officer of Health should go a long way to allay such concerns.

A further sensible measure to allay these concerns, and to further protect against the perception of political interference with public health decisions, would be to remove from the Minister of Health under the *Act* the direct operational power in cases of health risk, such powers to be assigned to the Chief Medical Officer of Health.

These measures are proposed to strengthen provincial control over public health protection with adequate safeguards to ensure the political independence of the Chief Medical Officer of Health and the local Medical Officer of Health in relation to infectious disease control.

Without stronger measures to ensure central provincial control of infectious disease control whenever necessary, Ontario will be left with inadequate protection against potential public health disasters.

POLITICAL WILL

A reformed public health system requires a major injection of resources. The Naylor, Kirby, and interim Walker reports analyzed the need for a critical mass of scientific and medical expertise, more capacity to educate, recruit, and retain public health professionals, increased laboratory capacity, and improved technology. Further recommendations are expected in the final Walker report. Significant financial resources will be needed to give Ontario's public health system any reasonable capacity for protection against infectious disease.

The decline of public health protection in Ontario reflects a consistent lack of political will, over the regime of many successive governments and all three political parties, to bring up to a reasonable standard the systems that protect us against infectious disease.

Competition for tax dollars is fierce. It is not easy in a time of fiscal constraint for any government to make additional funds available for any public programme. It will require significant political will on the part of the Minister of Health and the Ontario government to commit the funds and the long-term resolve that are required to bring our public health protection against infectious disease up to a reasonable standard.

It would be very easy, now that SARS is over for the time being, to put public health reform on the back burner. It is a general habit of governments to respond to a crisis by making a few improvements without fixing the underlying problems responsible for the crisis. It would be a tragedy if that turned out to be the case with SARS. As the Naylor Report pointed out:

> SARS is simply the latest in a series of recent bellwethers for the fragile state of Canada's … public health systems. The pattern is now familiar. Public health is taken for granted until disease outbreaks occur, whereupon a brief flurry of lip service leads to minimal investments and little real change in public health infrastructure or priorities. This cycle must end.[1]

Ontario, as demonstrated in this interim report, slept through many wake-up calls. Again and again the systemic flaws were pointed out, again and again the very problems that emerged during SARS were predicted, again and again the warnings were ignored.

The Ontario government has a clear choice. If it has the necessary political will, it can make the financial investment and the long-term commitment to reform that is required to bring our public health protection against infectious disease up to a reasonable standard. If it lacks the necessary political will, it can tinker with the system, make a token investment, and then wait for the death, sickness, suffering, and economic disaster that will come with the next outbreak of disease.

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[1] National Advisory Committee on SARS and Public Health, *Learning from SARS: Renewal in Public Health in Canada* (Health Canada: October 2003) p. 64. (Subsequent footnotes will refer to this report as the Naylor Report.)

The strength of the government's political will can be measured in the months ahead by its actions and its long-term commitments.

THE SARS COMMISSION

INTERIM REPORT

SARS AND PUBLIC HEALTH IN ONTARIO

1. A Broken System

SARS showed that Ontario's public health system is broken and needs to be fixed. Despite the extraordinary efforts of many dedicated individuals and the strength of many local public health units[2], the overall system proved woefully inadequate. SARS showed Ontario's central public health system to be unprepared, fragmented, poorly led, uncoordinated, inadequately resourced, professionally impoverished, and generally incapable of discharging its mandate.

The SARS crisis exposed deep fault lines in the structure and capacity of Ontario's public health system. Having regard to these problems, Ontario was fortunate that SARS was ultimately contained without widespread community transmission or further hospital spread, sickness and death. SARS was contained only by the heroic efforts of dedicated front line health care and public health workers and the assistance of extraordinary managers and medical advisors. They did so with little assistance from the central provincial public health system that should have been there to help them.

These problems need urgently to be fixed.

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[2] Ontario has 37 local Public Health Units. Twenty-seven of them are county-district health units. Nine are regional health departments. And one covers a single municipality, the City of Toronto.

2. Reason for Interim Report

The Commission's terms of reference provide for an interim report in the discretion of the Commissioner:

> Mr. Justice Campbell shall produce an interim report at his discretion and deliver it to the Minister of Health and Long-Term Care who shall make the report available to the public.

Ten months have passed since the end of the SARS crisis. Excellent reports on public health renewal have been produced by Dean Naylor, Senator Kirby, and Dean Walker. A consensus has emerged that fundamental reform is necessary and the time has come to make decisions about the future of public health in Ontario.

The work of this Commission will continue until I am satisfied that the necessary evidence has been reviewed. But government decisions about fundamental changes in the public health system are obviously imminent at this time. If the Commission's report on public health renewal awaits the completion of the entire investigation, of which public health is only one part, it will come too late to be of practical value. The Commission's public health findings and recommendations must therefore be released now on an interim basis. This interim report is based on the evidence examined to date and is not intended as the last word on this aspect of the Commission's investigation.

The fact that the Commission must address public health renewal on an interim basis is not to say it is more important than any other urgent issue such as the safety and protection of health care workers. It is simply a case of timing. The Commission continues to interview health care workers, SARS victims, the families of those who died, and those who fought the outbreak. Their story and the story of SARS will be told in the Commission's final report.

For an update on the Commission's ongoing work see Appendix A.

This interim report will:

- Summarize the problems in the provincial public health system revealed by SARS.
- Analyze some major issues around fundamental public health renewal.
- Present a few principles that reflect the lessons learned during SARS.

3. Hindsight

Everything said in this report is said with the benefit of 20-20 hindsight, a gift not available to those who fought SARS or those who designed the systems that proved inadequate in face of a new and unknown disease.

As Dr. James Young, Commissioner of Public Safety and Security, pointed out at the public hearings:

> … when we called the provincial emergency, we were dealing with an outbreak where we did not know for sure that it was a virus, we did not know for certainty what virus it was, we did not know what symptoms and what order of symptoms SARS presented with. We had a vague idea that some of the symptoms might include fever and cough. We did not, for example, for some period of time, realize that about 30 per cent of patients also could present with diarrhea. We did not know how long it incubated for. We did not know with certainty whether it was droplet spread or whether it was airborne. We did not know when it was infectious. We did not have a diagnostic test for it and still do not have an accurate diagnostic test. We had no way of preventing it, we had no vaccine and we had no treatment. What we had was an illness with many unknowns and virtually no knowns.[3]

It is easy, with the benefit of what we now know, to judge what happened during SARS. It is easy now to say which systems were inadequate and which decisions were mistaken. That is the great benefit of hindsight. As one military historian noted:

> Once a dramatic event takes place, it always appears to have been predictable because hindsight tells the historian which clues were vital, which insignificant, and which false. The unfortunate general who must act without the benefit of hindsight is much more likely to err.[4]

It is easy now in hindsight to see that systems were inadequate. It was harder to see their weaknesses before they were proved by SARS to be inadequate. A system that looks fine in normal times may prove wanting in the face of a new disease of unknown origin.

It is important to distinguish between the flaws of public health systems and the skill and dedication of those who worked within them. To demonstrate the weakness of Ontario's public health infrastructure is not to criticize the performance of those who worked within systems that proved inadequate in hindsight. The Commission recognizes the skill and dedication of so many individuals in the Ontario public health system and those volunteers from Ontario and elsewhere who worked beyond the call of duty. Twenty-hour days were common. They faced enormous workloads and pressures in their tireless fight, in a rapidly changing environment, against a deadly and mysterious disease.

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[3] *SARS Public Hearings*, September 30, 2003, p. 34.

[4] Steven E. Woodworth, *How Good a General Was Sherman?* North and South v. 7 no. 2, March 2004.

It is my hope that those who worked on the front lines and in public health in Ontario during SARS will accept that I have approached the flaws of the system with the utmost respect for those who gave their all to protect the public. We should be humbled by their efforts.

Although it is unfair to use hindsight to judge individual behaviour, hindsight is a useful tool in the search for lessons to be learned. Hindsight helps us understand what went wrong and what went right. Hindsight includes knowledge and wisdom learned after SARS and it can help us avoid in the future the mistakes of the past. Indeed the Commission has been urged to use hindsight to this end. Dr. Richard Schabas said at the public hearings:

> I want to make it clear and I will make it clear that I think hindsight is a very commendable and useful tool for this Commission.[5]

It is a defining feature of every investigation into a public crisis that the public interest is best served by a full account of what happened together with an account of the lessons to be drawn from the crisis and the events that led up to it. This necessarily involves the application of hindsight. Hindsight becomes suspect only when inferences are drawn that systems or people "should have" acted differently even though they lacked vital knowledge that became available only later.

In this interim report I have attempted to avoid, and I invite the reader to avoid, the unfair use of hindsight to judge the actions of those who struggled so valiantly in the fog of battle against the unknown and deadly virus that is SARS.

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[5] *SARS Public Hearings*, September 30, 2003, p. 8.

4. What Went Right?

Despite everything that went wrong SARS was eventually contained by the extraordinary personal efforts of not only front line hospital workers, and the public health workers in the field, but also by an exceptional group of scientists, doctors, epidemiologists, local Medical Officers of Health and other public health professionals who came forward when needed. SARS was eventually contained not by any central public health system but by the heroic work of those who stepped forward during the crisis.

The litany of problems listed in this report reflect weaknesses in central public health systems. These weaknesses hampered the work of the remarkable individuals who eventually contained SARS. The problems of SARS were systemic problems, not people problems. Despite the deep flaws in the system, it was supported by people of extraordinary commitment.

One observer, talking of the work of the Epi Unit, built from scratch as the outbreak unfolded, referred to the remarkable work done by those who pitched in quickly in order to plug the gaps in the existing systems:

> I wanted to make what I hope will be a really strong point and that is that amazing work was done by a lot of amazing people. People who cared passionately about public health, who cared passionately about doing good work under very trying circumstances … We had great epidemiologists, we had incredible technical support people … And we had great communications with some people outside of the Ministry, with other levels of government, with other jurisdictions and I think that sheer force of will in some cases is why SARS was beaten in this province and I don't want that to be forgotten. So just to, give kudos and say thank you to people who actually never got any formal thank you's.

Another expert from outside Ontario, while quite candid about the problems in the Ontario public health system, remarked how despite all those problems, a large number of people worked very hard to contain SARS. He stated:

> I remain in awe of how hard a whole bunch of people were working at trying to deal with the issue of SARS. I have the utmost respect for the efforts that people put into some situations literally putting their lives on the line. For someone who has done infectious diseases in Canada for a long time, that is very unusual but I mean people and particularly in the front line were working unbelievably hard. So were the people in and I do not want to be implied that some of the others in the more senior decision making were not working hard; they were working to the best of their ability so that was good. In any major outbreak investigation that I have been involved, it has been gratifying to see how people step up to the plate and put in the major efforts that they are required and some will do it for months on end.

One official from the Centres for Disease Control in Atlanta, made the following remarks:

> Let me begin by saying I think this is my personal view, not necessarily that of my agency. But I will speak plainly because what you are doing is so vitally important and it's precedent setting. So I will speak plainly. I hope you will take my comments perhaps with a grain of salt but I think personally that what is going on here is one of those examples of heroes without honour in their native land. I think that the … more I watch the story as it unfolds and is told and retold, I have a profound sense of awe and respect for some true heroes that stepped up and, and I don't think there is a health officer in the United States … that goes to bed at night that sometime doesn't hope, if it happens here, we will do as good a job as Toronto did. You are to be commended for this.

The strength of Ontario's response lay in the extraordinary work of the people who stepped up and fought SARS. What went right, in a system where so much went wrong, is their dedication. It cannot, however, be said that things went right because SARS was eventually contained. It does nothing for those who suffered from SARS or lost loved ones to SARS to say that the disease which caused their suffering was ultimately contained. For the families of those who died from SARS and for all those who suffered from it, little if anything went right. This enormous toll of suffering requires that the Ontario government commit itself to rectify the deep problems in the public health system uncovered by SARS.

5. A Constellation of Problems

Despite the eventual success in containing SARS, so many things went wrong in the provincial public health response that it is difficult to know where to start. These problems include:

- Problem 1: The Decline of Public Health
- Problem 2: Lack of Preparedness: The Pandemic Flu Example
- Problem 3: Lack of Transparency
- Problem 4: Lack of Provincial Public Health Leadership
- Problem 5: Lack of Perceived Independence
- Problem 6: Lack of Public Health Communication Strategy
- Problem 7: Poor Coordination with the Federal Government
- Problem 8: A Dysfunctional Public Health Branch
- Problem 9: Lack of Central Public Health Coordination
- Problem 10: Lack of Central Expertise
- Problem 11: No Established Scientific Backup
- Problem 12: Lack of Laboratory Capacity
- Problem 13: No Provincial Epidemiology Unit
- Problem 14: Inadequate Infectious Disease Information Systems
- Problem 15: Overwhelming and Disorganized Information Demands
- Problem 16: Inadequate Data
- Problem 17: Duplication of Central Data Systems
- Problem 18: Blockages of Vital Information
- Problem 19: Legal Confusion
- Problem 20: Public Health Links with Hospitals
- Problem 21: Public Health Links with Nurses, Doctors and Others

- Problem 22: Lack of Public Health Surge Capacity: The Toronto Example
- Problem 23: The Case of the Federal Field Epidemiologists

Problem 1: The Decline of Public Health

The decline of public health protection in Ontario began decades before SARS. No government and no political party is immune from responsibility for its neglect. As one witness observed at the public hearings:

> The second concern stems from the fact that we are in an election week. I worry that members of the media who are present here today, or those on the campaign trail will use what is said today as cannon-fodder, against one political party or another. I am not wedded to any party right now, in fact, I'm troubled by all of them, but let it be clearly noted; no party, federal or provincial, no bureaucracy, federal or provincial, is any less culpable for the problems we are seeing in the healthcare system today.[6]

One local Medical Officer of Health remarked that in his opinion, the general public has shown little interest in public health as well:

> I think that the general public has no general interest in public health until there is a specific problem [despite] the kind of wide spectrum of things that public health is supposed to be doing and trying to do with very limited resources and difficulty getting additional resources.

Ontario is not alone in its neglect of the public health system. There has been a clear recognition in the past few decades of a general decline in public health capacity across Canada. Warnings of the decline in Canada's public health capacity to protect against infectious disease have been raised since the 1970's.[7] In 1997, this problem was clearly identified by Mr. Justice Horace Krever in his report on Canada's blood system.[8] Mr. Justice Krever recommended "that the provincial and territorial ministers of health provide sufficient resources for public health services."[9] He stated:

> Public health departments in many parts of Canada do not have sufficient resources to carry out their duties. They must have sufficient personnel and resources to conduct adequate surveillance of infectious diseases, to develop and implement measures to control the spread of infectious diseases, including those that are blood borne, and to communicate with other public health authorities at both the federal and the provincial-territorial levels.

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[6] Testimony of Dr. Yoal Abells, a Toronto based family physician, board member of the Ontario College of Family Physicians, and chair of Family Physicians Toronto. *SARS Commission Public Hearings*, September 29, 2003.

[7] Naylor Report, pp. 52-5.

[8] The Honourable Mr. Justice Horace Krever, *Commission of Inquiry on the Blood System in Canada*, (Ottawa; November 26, 1997). (Subsequent footnotes will refer to this work as the Krever Report.)

[9] The Krever Report, Volume 3, p. 1073.

> Continued chronic underfunding of public health is a disservice to the Canadian public.[10]

In Ontario, Justice Dennis O'Connor in May of 2002 recommended an amendment to the *Health Protection and Promotion Act* requiring that vacant positions for Medical Officer of Health be filled expeditiously. Mr. Justice O'Connor also recommended that the Ministry of Health conduct on a regular basis assessments to ensure compliance with the Mandatory Health Programs and Services Guidelines[11] and to track on an annual basis trends in non-compliance by public health boards to assess whether altered programme services and guidelines are required and whether resource allocations require adjustment to ensure full compliance[12].

Mr. Justice O'Connor made the following observation:

> Both the Association of Local Public Health Agencies (aLPHA) and the Ontario Medical Association (OMA) made submissions regarding local boards of health. Their submissions focused on two issues: the need to ensure adequate resources to allow boards of health to fulfill their functions, and the need to clearly set out the roles and responsibilities of public health boards. Although the information before me is not extensive, both submissions are supported by the information and evidence brought to my attention. On the question of funding, the Ministry of Health has, since the early 1990s, increased the responsibility of boards of health without increasing the funding required to fulfill those responsibilities. The result has been that boards' compliance with ministerial requirements has decreased. A 1999 compliance survey carried out by the ministry found that compliance with the Mandatory Health Programs and Services Guidelines was only 75 per cent[13].

Despite the force and clarity of these recommendations, they were not followed. As Dr Larry Erlick, President of the Ontario Medical Association, told the Commission:

> If SARS indicated one thing to the Medical Officers of Health of the Province and to the public health branch itself it was that there is insufficient capacity in the system to deal with public health emergencies.
>
> This was highlighted in the Ontario Medical Association submission to the Walkerton Inquiry where Justice O'Connor's first recommendation, which

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[10] The Krever Report, Volume 3, p. 1073.

[11] Provincial standards for local Public Health Borads.

[12] Mr. Justice Dennis O'Connor, *Part One: Report of the Walkerton Inquiry*, (Toronto: January 14, 2002), pp. 263-4 (Subsequent footnotes will refer to this work as the Walkerton Report, Part One.)

[13] Mr. Justice Dennis O'Connor, *Part Two: Report of the Walkerton Inquiry*, (Toronto: May 23, 2002), p. 458. (Subsequent footnotes will refer to this work as the Walkerton Report, Part Two.)

> was suggested and promoted by the Ontario Medical Association, was that each region be required to employ a full-time Medical Officer of Health. To this date, there are vacancies in eight (8) full-time Medical Officer of Health positions and five (5) associate positions in the Province.
>
> It is not only a human health resource issue that has led to this lack of Medical Officers of Health but also a grossly underfunded public healthcare system. The current public healthcare system as it exists today has no elasticity.[14]

The failure of the Public Health Branch[15] to monitor local compliance with the Mandatory Health Programs and Services Guidelines, notwithstanding the Walkerton recommendations, was noted in the 2003 report of the Provincial Auditor:

> The Ministry had conducted virtually no regular assessments of local health units in the last five years to determine whether the health units were complying with the guidelines for mandatory programs and services. Such assessments were recommended in the Report of the Walkerton Inquiry: The Events of May 2000 and Related Issues (Part One of the Walkerton Report).[16]

This failure by the Public Health Branch to fulfill its mandate is unacceptable.

As noted in the Krever Report passage quoted above, however, Ontario is not alone in its lack of public health capacity and not alone in its declining attention to public health. And as the Naylor Report concluded,

> Ontario is assuredly not the weakest link in the P/T public health chain.[17]

It is hardly a source of pride to learn that Ontario is not the weakest link in Canada's chain of protection against infectious disease.

A federal-provincial Deputy Minister's report in 2002 noted:

> … an overall erosion of the public health system, with … reduced capacity to address ongoing and emergent challenges to public health such as water quality safety and management of infectious diseases.[18]

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[14] *SARS Commission Public Hearings*, September 29, 2003, p. 52.

[15] Under the present structure the Public Health Branch is part of the overall Public Health Division of the Ministry of Health and Long-Term Care. However, in this report, in order to reflect common usage, the Public Health Branch is used to refer to the entire Division.

[16] Provincial Auditor of Ontario, *2003 Annual Report*, (Toronto; December 2, 2003), p. 219.

[17] Naylor Report, p. 64.

Senator Michael Kirby in the 2002 report of the Standing Senate Committee on Social Affairs, Science and Technology stated:

> The Committee was told and is aware, however, that promotion, prevention, protection and population health activities do not claim anything like the close focus and high status that health care has in the eyes of the Canadian public and, obviously, public policy decision makers. Although it is clear that, collectively, the non-medical determinations of health have far greater impact on the health of the population than health care, the fact is that the very positive outcomes from promotion, prevention, protection and population health activities are generally visible only over the longer term, and thus they are less newsworthy. Because they are less likely to capture the attention of the general public, they are less attractive politically.[19]

The decline in public health priority and capacity is not restricted to Canada. A general decline of public health interest and capacity around the world has been attributed to the complacent feeling that improvements in vaccination, antibiotics and clinical medicine had conquered infectious disease. This complacency stemmed from the optimism reflected in a famous statement to Congress in 1970 by William H. Stewart, the U.S. Surgeon General, that the U.S. was

> … ready to close the book on infectious disease as a major health threat.

It has been pointed out again and again that this optimism was misplaced and that the health of the world continues to be threatened by infectious diseases including influenza, the West Nile virus, and other new diseases like SARS. One author noted that the re-emergence of diseases which were once on the decline has occurred primarily as a consequence of public health neglect:

> Re-emerging diseases are those, like cholera, that were once decreasing but are now rapidly increasing again. These are often conventionally understood and well recognized public health threats for which (in most cases) previously active public health measure had been allowed to lapse, a situation that unfortunately now applies all too often in both developing countries and the inner cities of the industrialized world. The appearance of re-emerging diseases may, therefore, often be a sign of the breakdown of public health measures and should be warned against complacency in the war against infectious diseases.[20]

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[18] Report to the Conference of Deputy Ministers, June 2001, paraphrased in the Naylor Report at p. 65.

[19] Standing Senate Committee on Social Affairs, Science and Technology, *The Health of Canadians – The Federal Role, Volume 6: Recommendations for Reform,* (Ottawa: October 2002), p. 241. (Subsequent footnotes will refer to this report as the Kirby Report.)

[20] Stephen S. Morse, "Factors in the Emergence of Infectious Diseases," in Andrew T. Price-Smith (ed) *Plagues and Politics,* (Palgrave: 2001), p. 22.

The trend towards complacency, followed by public health crisis, is not restricted to Canada. Speaking of New York City's battle against tuberculosis, Laurie Garrett writes:

> Today's reality is best reflected in New York City's battle with tuberculosis. Control of the W-strain of the disease – which first appeared in the city in 1991-92, is resistant to every available drug, and kills half its victims – has already cost more than $1 billion. Despite such spending, there were 3000 TB cases in the City in 1994, some of which were the W-strain. According to the surgeon general's annual reports from the 1970's and 1980's, tuberculosis was supposed to be eradicated from the United States by 2000. During the Bush administration, the CDC told state authorities they could safely lower their fiscal commitments to TB control because victory was imminent. Now public health officials are fighting to get levels down to where they were in 1985 – a far cry from elimination. New York's crisis is a result of both immigration pressure (some cases originated overseas) and the collapse of the local public health infrastructure.[21]

It is troubling that Ontario ignored so many public health wake-up calls from Mr. Justice Krever in the blood inquiry, Mr. Justice O'Connor in the Walkerton inquiry, from the Provincial Auditor, from the West Nile experience, from pandemic flu planners and others. Despite many alarm calls about the urgent need to improve public health capacity, despite all the reports emphasizing the problem, the decline of Ontario's public health capacity received little attention until SARS. SARS was the final, tragic wake-up call. To ignore it is to endanger the lives and the health of everyone in Ontario.

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[21] Laurie S. Garrett, "The Return of Infectious Disease," in Andrew T. Price-Smith (ed) *Plagues and Politics* (Palgrave: 2001), p. 192.

Problem 2: Lack of Preparedness: The Pandemic Flu Example

When SARS hit, Ontario had no pandemic influenza plan. Although SARS and flu are different, the lack of a pandemic flu plan showed that Ontario was unprepared to deal with any major outbreak of infectious disease.

Influenza[22] is not only one of the oldest known diseases, it is also one of the most common, affecting an estimated 10-25 per cent of Canadians each year.[23] While most recover completely, hospitalization and deaths occur in high-risk groups. An estimated 500-1,500 Canadians, mostly seniors, die every year from pneumonia related to flu. Between 250,000 and 500,000 deaths occur annually around the world.[24]

Three times in the last century radical new influenza strains have emerged to cause global pandemics.[25] The worst was in 1918-19 when 20 to 40 million people died world-wide, including an estimated 30,000 to 50,000 people in Canada.[26] Unpredictable and devastating, influenza pandemics necessitate extensive levels of preparedness if there is to be any hope of mitigating their consequences.

As Health Canada has stated:

> A pandemic can occur at any time, with the potential to cause serious illness, death and colossal social and economic disruption throughout the world. Experts agree that future influenza pandemics are inevitable but the timing of the next pandemic cannot be predicted. Since there may be little warning,

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[22] "Influenza is caused by a virus that attacks mainly the upper respiratory tract – the nose, throat and bronchi and rarely also the lungs. The infection usually lasts for about a week. It is characterized by sudden onset of high fever, myalgia, headache and severe malaise, non-productive cough, sore throat, and rhinitis. Most people recover within one to two weeks without requiring any medical treatment. In the very young, the elderly and people suffering from medical conditions such as lung diseases, diabetes, cancer, kidney or heart problems, influenza poses a serious risk. In these people, the infection may lead to severe complications of underlying diseases, pneumonia and death." (Source: World Health Organization, *Influenza – Fact Sheet No. 211*, (Geneva: March 2003).

[23] Health Canada, *The Flu*, (Ottawa; November 2003).

[24] World Health Organization, *Influenza – Fact Sheet No. 211*, (Geneva: March 2003); Health Canada, *The Flu*, (Ottawa; November 2003).

[25] Pandemic is defined as "An epidemic occurring worldwide, or over a wide area, crossing international boundaries, and usually affecting a large number of people." Source: Last, John M., ed., *A Dictionary of Epidemiology*, (Oxford, U.K.: 2001), p. 131.

[26] Health Canada, *Canadian Pandemic Influenza Plan*, (Ottawa: February 2004), p. 17.

> contingency planning is required to minimize the devastating effects of a pandemic.[27]

There are major differences between SARS and flu. There is no vaccine or timely test for SARS, flu transmission unlike SARS can be asymptomatic, they have different modes of transmission and different patterns of contagion. Despite these differences, a pandemic flu plan would have overcome many of the systemic weaknesses identified above. A pandemic flu plan would have been extremely useful as a template adaptable to SARS. As a member of the Science Committee noted:

> A pandemic plan, if we had a good one in place, it would have been extremely useful to pull out and use during this.

A pandemic plan, for example, sets out a process for the orderly ramping up of a staged response – ensuring that the response is commensurate with the scope and the extent of a developing outbreak.

A plan for a staged response would have been particularly helpful in the early days of SARS. The possibility that SARS would spin out of control, move into the community, and get ahead of the containment efforts, was a pressing concern in those early days of the outbreak when no one knew how widely it would spread. As Dr. James Young, Commissioner of Public Security, told the Commission's public hearings:

> We had no idea at that point in time if or how to control with certainty the SARS outbreak. The scope of what was happening, in fact, was increasing. We were having more cases by the day, not fewer and there was no end in sight and that was the experience, in fact, at that point in time, in Hong Kong, in Taiwan and in Beijing, as it started, that it got bigger and bigger and no one was bringing it under control at that point in time.[28]

Until then, the outbreak had generally been hospital based. The question was: Would it spread from a primarily health care setting and settle in the community? How far would it go? Would be restricted to Toronto? Or would it spread further? Did it have the virulence necessary to spark a pandemic? Finally, if it did get bigger and bigger, how would the health care system respond?

Faced with these concerns, Dr. Young met with the Science Committee, a quickly assembled ad hoc committee of experts, on the morning of April 2, 2003 and asked Committee members to prepare scenarios for the possible expansion of SARS into the community. The minutes reflected Dr. Young's concern about the possibility of community spread and his request for the committee to plan quickly for such an occurrence:

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[27] Health Canada, *Canadian Pandemic Influenza Plan*, (Ottawa: February 2004), p. 17.

[28] *SARS Commission Public Hearings*, September 30, 2003, p. 35.

> Planning for future scenarios (blue sky) – the planning should be done relative to where we are now and relative to the capacity of the health care system. The most immediate planning should be for expansion into the community.

One British Columbia member of the Science Committee suggested to fellow Committee members that Ontario's pandemic flu plan be used for this and other purposes,[29] and was more than surprised to learn that Ontario did not have a pandemic flu plan:

> I was shocked. In fact, I said well let's just use the pandemic flu plan and everybody looked at me and there was no pandemic flu plan. And so … I just got somebody to e-mail the B.C. pandemic flu plan over.

When the Science Committee on April 2, 2003 prepared the document requested by Dr. Young, called "Blue Sky Continued: Scenarios for Community," the B.C. pandemic flu plan[30] appeared to be integral to laying out three basic scenarios and responses.

The first scenario involved a situation in which,

> A few community cases with no apparent risk factors are identified. Recognition that once these cases are identified, this probably represents the "tip of the iceberg."

Were this scenario to occur, the recommendation appears to be that the B.C. pandemic flu plan – possibly just its preparatory stage – be put in place. If,

> A few community cases with no apparent risk factors identified … Would argue that the Pandemic Flu Plan – at least the "pre" phase of the plan should be implemented now. Pandemic flu plan for B.C. To be distributed and reviewed.

The second scenario involves an increase in the spread of cases in the community – possibly outside the Greater Toronto Area, also known as the GTA. The B.C. pandemic plan again appears to figure prominently in the possible response.

> As above [i.e. The first scenario] but more cases with or without spread outside the GTA. Again would implement the full-scale Pandemic flu plan with ramping up or widening the circle of hospitals/regions involved.

The third scenario involved the possibility that SARS would expand into an epidemic[31] – or even a pandemic. Once again, the B.C. plan was at the heart of the proposed response:

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[29] One Science Committee member said the B.C. pandemic flu plan was used, in early April 2003, to assist in preparing "the template to develop the precautious to prevent the transmission of SARS document."

[30] B.C. Centre for Disease Control, *Pandemic Influenza Preparedness Plan*, (Vancouver: February 18, 2003).

> Widespread community spread with significant morbidity and mortality. In a scenario such as this the GTA and/or Ontario would act as a world epicentre potentially. This scenario is relatively clear as the Pandemic flu plan is the automatic default and it becomes an international event. Must consider the possibility that this is not controllable – that there will be an epidemic event and herd immunity would eventually develop.

Although it was not reflected in the minutes of the Science Committee, one participant in the deliberations said another B.C. document – its bio-terrorism response plan[32] – was also helpful in preparing these scenarios.

When the Science Committee subsequently prepared other worst-case scenario documents, they also used the draft federal pandemic plan. One member of the Science Committee told the Commission:

> We were looking at the possibility of broader community spread. We were hoping that didn't happen, but we were moving into that era of broader community spread. And so we thought two things, two things really lacking. We saw the need for that type of planning and we saw the need particularly for some Public Health planning around that. But a couple of the planning pieces that we worked on, particularly for the Science Group, actually used, we used the pandemic framework for doing it.

This Science Committee member suggested that the draft federal plan provided a detailed means of preparing for different outcomes:

> But why we liked the pandemic framework was, it had all the components in it, and without doing that, we were missing components. So it had, for example, there's an emergency response component, there's a clinical services component, there's a public health measures component, there's a surveillance component, there's a communication component. And in the one for continuing to spread, we actually developed it with two columns. And one is immediate measures, like that's tomorrow, next week. And the other was the slightly longer-term, and that became more the recovery type of thing. And that's the column that really then turned into our longer-range plan.

Fortunately, SARS was ultimately contained and community spread was limited. But fallback to the B.C. and federal influenza pandemic plans, untested in Ontario and, in the case of

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[31] Epidemic is defined as "The occurrence in a community or region of cases of an illness, specific health-related behavior, or other health related events in excess of normal expectancy. The community of region and the period in which the cases occur are specified precisely ..." Source: Last, John M., ed., *A Dictionary of Epidemiology*, (Oxford, U.K.: 2001), p. 60.

[32] Bioterrorism Response Advisory Team, *Exposure to Biological Agents Response Plan*, (Vancouver: February 21, 2002).

B.C., designed for a completely different health care system, would have been required if SARS had gone further in Ontario. Had SARS been more virulent and spread into the community, it appears that the B.C. and federal pandemic plans – in the absence of an Ontario one – would have been crucial to the response.

Ontario had none of the pre-SARS preparedness that would have come from the development, even if not completed, of a pandemic flu plan. One expert thought Ontario was hampered by the need to get people together for the first time in an emergency, instead of falling efficiently into a pre-planned cooperative response:

> Q: Do you think the absence of such a plan affected Ontario's ability to respond to SARS?
>
> A: Yes, I did because you were creating the infrastructure at the same time you were trying to deal with quite the dire situation. I think that the people who did this are wonderful people and very knowledgeable people. But they were working under conditions where they were trying to establish a reporting structure and getting to know people from occupational health and epidemiology and public health – learning how to work with them at the same time they were trying to respond to this crisis.

This expert told the Commission that a pandemic plan, together with the intensive process of preparing it, would have helped put the necessary infrastructure in place:

> There was no basic structure, you know, on which anybody could hang their hat. I think that one of the huge differences, and I hate to compare two sites. But it was very clear at the table that a lot of people were meeting for the first time and that's always difficult because they're trying to figure out who everybody is and exactly what the roles and responsibilities are. And it's unclear, and then you're working under all this pressure. And one of the big differences here [in B.C.] is that we've been working together for a number of years, first with our biological response advisory team and then that evolved, of course, into the pandemic flu plan. So we had a structure whereby we were quite familiar with each other in the public health sector and the hospital sector and we also had a number of structures even within the medical microbiology community. Our B.C. Association of Clinical Microbiologists meets regularly. We all know each other. Public health sits on our infection control committee so I think all of that made it just so much easier for us to respond. We knew who the players were, we know what everybody was supposed to do and we worked very cohesively. And I had quite a sense [in the Ontario SARS response] that the medical microbiologists knew each other but that they had never really worked together as a community. Mainly people did their things within their own centres, knew each other collegially from meetings etcetera etcetera, but had never worked on a big broad stroke project of any type like a pandemic flu plan or a bio-terrorism plan.

Although Toronto Public Health did not have a pandemic flu plan it was in the process of developing one. The preparation process had already produced some of the working relationships between agencies that are so essential when the need comes to work together during an emergency. One Toronto Public Health staffer noted that these working relationships, created during the course of work on the Toronto flu pandemic plan, were used to great effect during the fight against SARS:

> What we used to the greatest effect were the working relationships that were established or strengthened through the [pandemic flu] planning process.

A member of the Science Committee said the same thing about the ongoing work to develop a federal flu pandemic plan:

> Thank goodness that we had strong people that worked on the pandemic plan federally and we had strong work groups across the country because they were very much the saviour for the Science Committee in terms of trying to figure out what were the public health measures that we should be doing, what were reasonable surveillance things to do, how should we manage … Thank goodness we had a strong work group established for the pandemic planning federally.

A continuing theme of this report is the lack of clarity of federal, provincial and local duties, roles and responsibilities and the lack of pre-planned machinery to ensure effective linkages and cooperation in a time of crisis. Pandemic flu plans establish a clear command and control structure and outline the duties and responsibilities at each governmental level in response to an infectious outbreak[33]. Had this kind of planning and structure been in place before SARS hit, many of the problems noted in this report could have been avoided.

Although the lack of an Ontario flu pandemic plan is troubling, Ontario was not the only jurisdiction without such a plan. What is more troubling is that Ontario was so far behind in the pandemic flu planning process. Nothing had been done that provided any significant assistance to the fight against SARS.

It was not as if the need for such a plan was unknown. As early as May 1998, the Advisory Committee on Communicable Diseases in Ontario noted the lack of an Ontario pandemic flu plan and clearly identified the need for it. At that time, Dr. Monica Naus was the Physician Manager and Epidemiologist at the Disease Control Service of the Public Health Branch in the Ministry of Health and Long-Term Care. This Branch oversees the Ministry's public health programs and is the province's primary contact point with local public health units. Dr. Naus was by all accounts a strong supporter of the development of an Ontario pandemic flu plan. In the fall of 1998, she arranged a local, provincial and territorial planning conference, noting that;

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[33] See the following sections in *B.C. Pandemic Influenza Preparedness Plan*: Annex F – Municipal/Local Government Planning Considerations; Annex G – Provincial health Agencies Roles and Responsibilities, and Annex H – Overview of Federal Roles and Responsibilities. See Section 4.0 – Response, in the *Canadian Pandemic Influenza Plan*.

> … the initiative has implications for other large scale communicable disease emergencies.

The conference took place in February 1999 in Toronto, and was attended by representatives from agencies and institutions in the provinces whose mandates have implications for pandemic planning. The conference's summary document noted that despite three influenza pandemics in the past century, no plans to deal with such a disaster had been developed either locally or provincially.[34]

As the conference summary document indicated, attendees were aware of contemporary incidents that underlined the need for a plan. In 1997 an avian strain of influenza was isolated from a child in Hong Kong. After 18 cases, six of them fatal, some feared the outbreak had the potential to become the next influenza pandemic. This outbreak was contained, but the need for pandemic planning and preparedness was further underlined.[35]

The attendees emphasized the need to establish linkages among experts before an outbreak happens. They also recommended that advance plans be established for communications, surveillance and emergency preparedness – and that a provincial pandemic influenza committee be established with clear terms of reference and membership, including health care sector institutions.

Regrettably, despite the 1999 recommendation, nothing of note happened. One of the greatest hindrances to the fight against SARS was the lack of linkages between public health and hospitals, linkages that would have been created in the development of a pandemic flu plan. Had the pandemic plan been completed, or even if the planning process had brought the key players together in advance of SARS, Ontario's defences would have been stronger when SARS hit.

In a statement that foreshadowed what came to pass in SARS, the conference report noted that infectious outbreaks come without warning:

> … because a pandemic comes without warning and causes such devastating global and social disruption, it is incumbent on public health to undertake pandemic planning.[36]

In October 1999, Dr. Naus sent a letter to all Medical Officers of Health in Ontario that, once again, expressed the importance of pandemic planning. Using words that describe the problems faced when SARS hit Toronto, she stated:

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[34] Disease Control Service, Public Health Branch, Ontario Ministry of Health and Long-Term Care, *Proceedings of the Ontario Influenza Pandemic Planning Conference*, (Toronto: February 25-26, 1999), p. 1. (Subsequent references to this document will refer to Pandemic Conference Report).

[35] Pandemic Conference Report, p. 1.

[36] Pandemic Conference Report, p. 12.

> Once we receive a pandemic warning, there may not be time to initiate planning. To a great extent, an effective response will depend on the advance establishment of an effective infrastructure for surveillance, emergency response, vaccine and antiviral delivery, and communication and coordination.

Despite commitments within the Ministry of Health and Long-Term Care in both the early and latter parts of 2000, to form a pandemic planning committee at the provincial level, little seemed to get accomplished. Despite the efforts of Dr. Naus to encourage the development of an Ontario flu pandemic plan, her initiative was not taken up by the Public Health Branch and the task of preparing the plan was eventually re-assigned within the Branch.

In the years that followed, local Medical Officers of Health were encouraged by the province to work on local pandemic flu plans. However, there was little progress on the provincial plan. As one Medical Officer of Health noted:

> It is pretty difficult to work on your local plan when you don't know what the province is going to do.

It is ironic that the Public Health Branch urged local health units to develop pandemic flu plans when the province had not developed an Ontario plan. One local Medical Officer of Health, asked whether the province had an overall pandemic flu plan at the time of SARS, told the Commission:

> Well the irony is that I recall Dr. D'Cunha saying on repeated occasions 'I am telling you that all local health units better have a pandemic flu plan, I am telling you to do it,' and I assumed that the province had one if they were telling us to do one

Regrettably, the province had no such plan.

In May 2001, a national pandemic planning meeting in Montreal was attended by Ontario representatives. At that time, the provincial Advisory Committee on Communicable Diseases[37] noted in a letter to the Ministry of Health that "many provinces appear to be far ahead in the planning process." The letter added: "many other Canadian jurisdictions have better clarified the role of the various agencies and government partners, which needs to happen in Ontario."

In May 2001, two years after the above-noted planning conference, the Advisory Committee on Communicable Diseases wrote a letter to the then Minister of Health, Mr. Tony Clement, with a copy to the Chief Medical Officer of Health. The letter outlined the lack of preparation in Ontario and emphasized the need for planning to move forward. The Committee said:

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[37] This Committee advises the Ministry of Health and Long-Term Care on strategies, guidelines and policies for communicable disease control in Ontario.

> The next influenza pandemic could overwhelm the health care system and disrupt all functioning of society for a considerable period. Along with the federal government and other provinces, Ontario began serious planning for pandemic influenza in 1999, but we seem to have lost our way. At a federal-provincial meeting held several weeks ago in Montreal, it became obvious that Ontario's planning has fallen seriously behind. Medical officers of health are trying to develop local pandemic influenza response plans but there work is hindered without a provincial plan and leadership.

The Committee went on to "strongly" recommend that the Ontario pandemic planning process be reactivated as soon as possible. The Committee noted: "While health has the lead for pandemic influenza planning, coordination with other ministries and with Emergency Measures Ontario is vital" and that "pandemic planning has additional benefits and will help ensure preparedness for other disease emergencies."

Mr. Clement said he had no knowledge of any concern about the lack of a pandemic flu plan and that the letter would not normally come to his attention:

> A lot of these letters get replied to by the Branch … [It] doesn't ring a bell, but you know I would have gotten 20,000 letters a year … But now, if you would have asked me … as Minister, do you assume that your Branch has a pandemic plan? My answer would have been yes, I would have assumed that would have been in the normal course of what you'd want to have in your back pocket … The other side of it though, is that every pandemic is different. So you're going to have to create systems based on the particulars of what you're facing. Systems are great, but whatever you're facing is going to be different from whatever you faced the time before.

In the months that followed the May 2001 letter to the Minister, the Public Health Branch continued to emphasize the need for local health units to prepare their pandemic plans, yet the province still seemed to be doing nothing on its own plan.

In July 2001, Dr. Naus left the province to relocate to the British Columbia Centre for Disease Control. In doing so, Ontario lost a strong advocate for pandemic planning. Her departure was regarded by many as a loss to Ontario.

In November 2001, the Advisory Committee on Communicable Diseases noted that the provincial pandemic influenza committee had not met in over a year.

Notwithstanding these wake-up calls, no plan materialized in 2002. It is unclear exactly who or what was the source of the delay.

When SARS hit in March 2003, an early draft of an Ontario pandemic influenza plan is reported to have been in circulation within the Public Health Branch. However, few report having seen the draft or even been aware of its existence and no one at the Branch seems to have offered to make the draft plan available to the Science Committee.

One Science Committee member said:

> The Emergency Response people at the Province should have known that there was a plan, if there was a plan.

No one outside the Branch had seen the draft plan. None of the necessary interdisciplinary connections had been formed and none of the preliminary preparation had been done to make it operational.

As one member of the Science Committee told the Commission:

> … if there was one in early SARS, we would have seen it; the people who sent it out would have sent it out to the field or would have supplied it to the Science Group [i.e., the Science Committee] who were in fact using the B.C. plan to create some things to work from and busy working from the federal and the B.C. plan so no one produced an Ontario plan.

Whatever stage the draft was at in 2003, the fact remains that it was not yet operational and it provided no assistance during SARS.

To put together a provincial pandemic plan a number of parts needed to come together, including public health, labs, hospitals branch, emergency response and emergency management. Whoever one may consider accountable for this failure of public health leadership, it is clear is that this did not happen and, even after five years and many warnings, there was no provincial pandemic plan. Consequently, when SARS hit there was no plan for a widespread outbreak and the necessary machinery and linkages to deal with a widespread outbreak like SARS had not been established. Although significant work has been done since SARS to develop an Ontario pandemic flu plan, the work is not yet complete.

Had a pandemic flu plan been in place before SARS, Ontario would have been much better prepared to deal with the outbreak. The failure to heed warnings about the need for a provincial pandemic flu plan, and the failure to put such a plan in place before SARS, reflects a lack of provincial public health leadership and preparedness.

Problem 3: Lack of Transparency[38]

Because there was no existing plan in place for a public health emergency like SARS, systems had to be designed from scratch. Ad hoc organizations like the Epi Unit and the Science Committee were cobbled together. Procedures and protocols were rushed into place. There was little opportunity for feedback between the local health units, hospitals and the Provincial Operations Centre that oversaw the effort to contain SARS. A lack of earlier planning and ongoing consultation meant that those working in local health units were often directed by the Provincial Operations Centre to do things for which they thought there was no clear rationale.

Many people regarded the Provincial Operations Centre as a full-fledged organization. In fact, it was simply a room that functioned as an operations centre. To local public health units, it was unclear who comprised the Provincial Operations Centre, what they did, how they made their decisions and what was their legal authority for issuing directives.

One physician at the Public Health Branch of the Ministry of Health described the confusion as follows:

> I wanted to know who was in this POC, because when I would call them, they were just saying, you know, POC and I wanted to say like, Who Are You? And, I mean, not that it was a big issue where, you know, you'd imagine major litigation or but it was, it was a huge issue on a day-to-day basis on the clinical side is how do they make these decisions, who's making them?

Another public health professional who worked with the Provincial Operations Centre described how a local Medical Officer of Health was shocked to learn that he was legally responsible for the outcome of the implementation of directives – not the Provincial Operations Centre that issued them:

> I said well, the directives, if you understand them correctly they are given out to you and in the end you have to wear them. The person was stunned. They said are you telling me when I carry out directives as a liability, I am the one on the line. Yes. you are.

The lack of transparency surrounding the role of the Provincial Operations Centre was exemplified in the adjudication system it implemented in early May. It sprang up out of necessity. Because SARS was such a difficult disease to diagnose – there were no reliable lab tests and knowledge about the disease was rapidly evolving on a daily basis – there were disagreements from time to time as to whether a particular case was a case of SARS.

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[38] This interim report deals only with public health issues. Other problems of lack of transparency, for example the creation of the directives to hospitals, will be addressed in the final report.

Since SARS was a reportable disease under the *Health Promotion and Protection Act*, physicians and hospitals were legally required to report new cases to the local Medical Officer of Health.[39] The local Medical Officer of Health, in turn, had a corresponding duty under the *Act* to report new cases to the province[40] – as either a probable or suspect case of SARS. This was a heavy burden because of the impact of a mistake. Missing a case could lead to further spread of the disease. A faulty diagnosis, on the other hand, could unnecessarily close hospitals, schools, public buildings and other workplaces – and quarantine large numbers of people. It could also have consequences on the world stage – where the WHO was closely monitoring the situation in Ontario.

It was critical that each SARS case be recognized and reported. It was equally vital that every non-SARS respiratory infection not be classified as SARS simply as a precaution.

As one witness commented:

> Q: When you get clinical and scientific disagreement, how do you tell whether or not it is SARS?
>
> A: … it was easier to label people as SARS because you had covered yourself. But from a public health follow up it has major implications.

There clearly was a need to ensure accuracy and consistency of classification and reporting of cases. Having regard for the challenges of making a correct diagnosis, it made sense to set up a case review system to assist local Medical Officers of Health by giving them access to SARS experts. Although well meaning, the adjudication system lacked clear lines of accountability and in particular it lacked transparency.

First, the adjudication system appeared to supplant the decision-making of the local Medical Officers of Health. There was no explanation why, well over a month into the outbreak, the adjudication process was suddenly imposed.

Second, the adjudication system was not clearly defined or explained. A May 2nd memorandum from Dr. D'Cunha, the Chief Medical Officer of Health, to all Medical Officers of Health and Associate Medical Officers of Health simply stated:

> Effective immediately, all new, potential "probable cases" of SARS require adjudication by the POC.
>
> If a potential probable case is identified in your jurisdiction or circumstances would indicate reclassification of an existing suspect case to a probable case, you are to contact [name and number of contact person] to make arrangements for a chart review.

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[39] Pursuant to s. 25(1) and 27(1) of the *Health Protection and Promotion Act*.

[40] Pursuant to s. 31(1) of the *Health Protection and Promotion Act*.

> Please be prepared to forward by courier the copies of all relevant information, including clinical information and copy/s of x-ray/s to the infectious disease consultant on call that day.
>
> Thank you for your cooperation.

It was unclear in the memo how the adjudicators were chosen, or why they were best qualified to make decisions. While the name and telephone number of a contact person were provided in the memo, many Medical Officers of Health did not know the person and were unfamiliar with her qualifications, position, role, and authority. Moreover, they did not know who would receive any confidential personal health information about a possible SARS case, where this information would go, how many people would have access to it and whether they had a right to it. The local Medical Officer of Health did not know what would happen if they did not accept the advice of the adjudicator or who had the final call. The local Medical Officer of Health did not know who would be accountable and bear the ultimate legal responsibility if they changed their initial classification of a case based on advice given through the adjudication process.

How the adjudication system was to be implemented was unclear. Was it to be voluntary in that the Medical Officer of Health could resort to it for advice but was not required to do so? Or was it mandatory in the sense that that all new SARS diagnoses had to be screened through this process? The use of the word "adjudicate"[41] and the wording of the May 2nd memo suggests that it was to be mandatory. If this was the case, wondered many local Medical Officers of Health, what was the legal authority for the adjudication process?

One Medical Officer of Health described it as follows:

> An adjudication process was introduced that was designed that any listing of a new probable case had to go through a case review by the provincially selected infectious disease specialist. They were to gather all the chart information from the hospital. They would not have the epi information that was in the public health charts on whether this was a case or not – a probable or suspect case, and submit a report in writing to the POC or SOC, it was never described who they would report it to, and then we were supposed to accept this benignly.

The concerns of Medical Officers of Health sometimes rose to serious levels of mistrust. Many were troubled by the fact that the adjudication process was imposed two days after the WHO travel advisory had been lifted. More will be said about the adjudication process and the classification of cases in the final report. Suffice it to say that the lack of transparency in the adjudication system led to confusion over roles and responsibilities and created the perception among some that local Medical Officers of Health were being muzzled by the province.

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[41] The Canadian Oxford Dictionary defines adjudicate as: "Act as judge in competition, court, tribunal, etc."

In a widespread public health system with 37 different local Medical Officers of Health, it makes sense during an infectious disease outbreak to have some central system in place to ensure as much as possible the accuracy and consistency of local decisions to designate a case as a reportable disease. The difficulty with the adjudication system during SARS comes down again to lack of planning and preparedness. There was no time to plan or consult before imposing a system that inevitably, because it sprung up overnight, attracted all the problems associated with lack of prior consultation and lack of transparency.

To avoid this problem in the future the Commission recommends that the respective roles of the Chief Medical Officer of Health and the Medical Officer of Health, in deciding whether a particular case should be designated as a reportable disease, should be clarified and regularized in a transparent system authorized by law.

Problem 4: Lack of Provincial Public Health Leadership

Few worked harder during SARS than Dr. Colin D'Cunha, the Chief Medical Officer of Health for Ontario and Director of the Public Health Branch in the Ontario Ministry of Health and Long-Term Care. He demonstrated throughout the crisis a strong commitment to his belief of what was in the public interest. Dr. D'Cunha is a dedicated professional who has devoted his career to the advancement of public health. However for the brief reasons that follow Dr. D'Cunha turned out in hindsight to be the wrong man in the wrong place at the wrong time.

While it may be due to misunderstandings or a simple difficulty on the part of Dr. D'Cunha to communicate effectively, there is a strong consensus on the part of those colleagues who worked with him during the crisis that his highest and best public calling at this time is in an area of public health other than direct programme leadership. This general concern has undoubtedly been reflected in the government's decision to provide him with other opportunities within his area of expertise.

Because Dr. D'Cunha no longer holds the office of Chief Medical Officer of Health it might be asked why it is necessary in this interim report to deal with his leadership during SARS. The answer is that the public has a right to know what happened during SARS and that obliges me to make whatever findings I am taken to by the evidence. The story of what happened during SARS cannot be told without some reference to the difficulties that arose in respect of Dr. D'Cunha's leadership.

I cannot fairly on the evidence before me make any finding of misconduct or wrongdoing by Dr. D'Cunha. The underlying problems that arose during SARS were systemic problems, not people problems. Because the underlying problems were about inadequate systems and not about Dr. D'Cunha, it would be unfair to blame him or make him a scapegoat for the things that went wrong.

A man who engenders controversial responses, he has strong supporters and strong detractors. This is not the occasion to mediate the controversies about his leadership and management style. It is enough to say that the crisis of SARS brought out the most controversial and least helpful of his characteristics as a leader and manager.

His friends and supporters see him as a strong advocate for public health, badly treated by the system that he served with such dedication. Those who see him less charitably think he cultivated those above him and did not appropriately value those below him. Against the many anecdotes recounted by those who felt they were inappropriately and wrongly criticized by him, and by those who observed behaviour they considered inappropriate or self-absorbed in a time of public crisis, there are many reports of his total commitment to the proper handling of the crisis according to his own lights. For instance, Dr. Yoal Abells, on behalf of the Ontario College of Family Physicians, in a presentation at the Commission's public hearings described the leadership of Dr. D'Cunha, among others, as "excellent."[42]

As noted in this report, there was a sense in recent years that bright independent minded people were not particularly welcomed and that experts from other provinces were reluctant to come to the Ministry of Health's Public Health Branch because of concern over what they perceived to be a difficult working environment.

A number of Medical Officers of Health even before SARS thought there were problems with Dr. D'Cunha's leadership. They thought that the Ontario public health community was being shut out of useful federal-provincial committee work because of the perceived difficulty of working with Dr. D'Cunha.

Some senior people in the Branch developed the impression that Dr. D'Cunha discouraged the sharing of information with local public health units in the field and that he communicated the impression to Public Health Branch employees that "the field is not your friend."

As outlined below, there was a lack of positive leadership in Dr. D'Cunha's position in relation to West Nile planning, surveillance, and management.

To some who worked with him during SARS his behaviour appeared puzzling. It seemed to them that he was more preoccupied with his personal authority as Chief Medical Officer of Health than he was with working with others to get the job done. These concerns include the observation that he would make himself unavailable if he felt personally slighted by the presence of someone he considered an intruder on his own turf. His supporters on the other hand suggest that he responded appropriately by staking out the authority of his office in response to the inappropriate presence of outsiders in the management of a public health crisis that by law and by bureaucratic convention was his alone to direct entirely by himself as he saw fit.

It is unnecessary to review in detail the different points of view between Dr. D'Cunha and some of his colleagues as to whether he blocked the flow of information in order to assert his status and territory in a complex turf dispute among local health units, the provincial Public Health Branch, the Hospital Division of the Ministry of Health, the federal government, and all the other governmental players necessarily involved.

What is abundantly clear, despite Dr. D'Cunha's recollection that he always shared and never withheld information, is that a contrary body of opinion is held by some who worked with him closely. Perception, in a time of crisis, is as important as fact. Many colleagues ended up with the impression that Dr. D'Cunha felt that knowledge was power and the best way to demonstrate to others that he was in charge of his own turf was to show them that he controlled the flow of information. Having regard to Dr. D'Cunha's recollection to the contrary this impression may well be inaccurate and may simply reflect misunderstandings.

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[42] Dr. Abells is a Toronto-based family physician, a member of the Board of the Ontario College of Family Physicians, and the Chair of Family Physicians Toronto. See *SARS Commission Public Hearings*, September 29, 2003, p. 126.

The problem is that, in a crisis, teamwork is essential and any impression that impairs teamwork, whether or not the impression is accurate, can defeat the common effort.

It is not the job of this Commission to sort out the conflicting views of Dr. D'Cunha's performance or leadership style. It is enough to say that his management style, and the perceptions of those who felt him difficult to work with – perceptions also found outside the province - impaired his ability to do the job that was necessary in the circumstances.

On the other hand some of those who saw his difficulties recognized also his genuine concern and felt that the basic problem was simply a tendency to micromanage:

> I think he was genuinely concerned about the outbreak … I'm sure the pressure on him was tremendous and I think his natural reaction was to grab it and try to micromanage[43] it, which was the wrong, it was the wrong approach … You know, in his position, in my view what you have to do is step back, let people go, trust that people are going to do the job and let them do things.

Another knowledgeable observer, referring to Ontario's public health response said:

> I think that Colin [Dr. D'Cunha] was out of his depth. I think that probably most of or all of the senior Ontario response folks were out of their depth so it is not a flaw. I think that they were well meaning and trying hard but did not have the experience to recognize the hole that they were in and to respond in this timely and aggressive and coordinated manner as would have been hoped for. Those are not character flaws but wrong people in the wrong place or not given the support they needed, one or the other.

These problems together with the lack of readiness for a public health emergency forced those fighting the disease to work around Dr. D'Cunha and led to an unwieldy emergency leadership structure with no one clearly in charge. A de facto arrangement had sprung up whereby Dr. D'Cunha shared authority with Dr. Young, Commissioner of Public Safety and Security. More will be said in the final report about this arrangement. The lack of clarity as to their respective roles, together with Dr. D'Cunha's rigid concept of his personal authority as Chief Medical Officer of Health made it difficult for him to share responsibility and work in a cooperative team fashion with others, including Dr. Young and local Medical Officers of Health in the field.

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[43] Micromanagement is a natural human response to crisis and a common problem in emergency leadership by people who may be extremely good at their day-to-day jobs. As noted in *Jane's Facility Security Handbook* "In brief, the Incident Commander is in charge … An effective IC must be proactive, decisive, objective, calm and quick-thinking. To handle all responsibilities of this role, the IC also needs to be adaptable, flexible and realistic about his or her limitations. The IC must be **a leader, not a micro-manager**. Typically, individuals prefer to perform an act themselves rather than delegate tasks … The need for an effective IC cannot be overly stressed, particularly during a response to an unpredictable incident that can easily escale out of control." [emphasis in original] Source: Jane's Information Group, *Jane's Facility Security Handbook* (London: 2000), p. 310.

These problems led in turn to Dr. D'Cunha's increasing interest in securing the approval of the Minister's office and his reliance on connections above because of his difficulties in working with people at his own level or below him in the hierarchy. This unhappy constellation of events in turn produced much of the perception that events were being directed by Dr. D'Cunha's view of what would make his political masters happy.

Dr. D'Cunha did not appear to those who worked in the crisis to have any degree of independence or autonomy from the Minister's office, either functionally or by personal inclination. Many thought that he preferred to deal with the Minister and his office rather than dealing with those colleagues brought in to co-manage the crisis. This in turn led to a perception by some that his approach to the handling of the crisis was politically oriented and not grounded independently in public health principles.

As noted below, the Commission has not at this stage of its investigation found any evidence of political interference with public health decisions during the SARS crisis. There is however a perception among many who worked in the crisis that politics somehow played a part in some of the public health decisions. Whatever the ultimate finding may be on this issue, Dr. D'Cunha's approach left too many colleagues with the perception that he was too much a political animal and too little an independent public health professional.

It is impossible to say, in the end result, that Dr. D'Cunha's difficulties made any ultimate difference in the handling of the crisis. Although his colleagues were frustrated by his approach to things, the crisis was to a large extent managed around him. It is hard to say that the overall result of the SARS crisis would have been different with someone else at the helm.

Problem 5: Lack of Perceived Independence

The Commission on the evidence examined thus far has found no evidence of political interference with public health decisions during the SARS crisis. There is however a perception among many who worked in the crisis that politics were at work in some of the public health decisions. This perception is shared by many who worked throughout the system during the crisis. Whatever the ultimate finding may be once the investigation is completed, the perception of political independence is equally important. A public health system must ensure public confidence that public health decisions during an outbreak are free from political motivation. The public must be assured that if there is a public health hazard the Chief Medical Officer of Health will be able to tell the public about it without going through a political filter. Visible safeguards to ensure the independence of the Chief Medical Officer of Health were absent during SARS. Machinery must be put in place to ensure the actual and apparent independence of the Chief Medical Officer of Health in decisions around outbreak management and his or her ability, when necessary, to communicate directly with the public.

Problem 6: Lack of Public Health Communication Strategy

A full examination of the effectiveness of public health communication during SARS awaits the completion of the Commission's investigation. The final report will also examine and comment on equally important communication issues, including those involving health care workers, victims of SARS and their families. But, in view of the impending changes to the public health system, it is important that the Commission discuss the evidence to date regarding public health communication because of its crucial role in a crisis like SARS.

When successful, public communication provides everyone with vital information, helps them make an informed assessment of the situation and the attendant risks, bolsters trust between the public and those solving the crisis, and strengthens community bonds. As Dr. Garry Humphreys, Medical Officer of Health for Peterborough County and City, said at the Commission's public hearings:

> It is important to have a willing cooperation of the community with regards to disease control through voluntary quarantine. This can only be achieved when the community is continuously kept informed. In addition, those placed under quarantine must be fully informed of the circumstances including what is expected of them and the followup through routine monitoring by staff of the health unit.[44]

A failed effort can breed confusion and antagonism, disrupt an orderly response, poison relations with public authorities and sow mistrust. It can also significantly hamper the SARS response. As Dr. David McKeown, the Medical Officer of Health for Peel Region, said at the Commission's hearings:

> I think it's instructive to know that local Medical Officers of Health, particularly those in the health units adjoining Toronto, who were most involved, often heard, for the first time, about significant developments in the outbreak by watching the daily media briefings.
>
> I remember hearing a federal health official speak in the midst of the outbreak, with some pride, about the fact that they were monitoring events in Hong Kong by having a Chinese-speaking employee listen to local Hong Kong media. I think that really was evidence of a failure of communication in an international public health system.
>
> And, similarly, the fact that Medical Officers of Health in the Greater Toronto Area felt that it was critical to sit and listen to media broadcasts in order to get critical information to do their work is an indication that the

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[44] *SARS Public Hearings*, October 1, 2003, p. 17.

> systems of communication within the public health field were not operating as they should have.[45]

Poor public health communication can also have a negative economic impact, if messages intended for a local audience resonate negatively on the international scene. Some experts believe this may have been the case with SARS. A study of SARS media coverage by the Robarts Centre for Canadian Studies at York University in Toronto[46] found:

> The message used to contain the outbreak locally was the same message heard by investors, consumers and foreign citizens … media consumers around the world … were then more prone to associate the outbreak, rather than its containment, with Toronto.[47]

Jody Lanard and Peter Sandman,[48] two prominent American experts in risk communication, contrasted Ontario's efforts with those of Singapore, which they described as exemplary:

> Early on, several Asian countries warned against travel to Singapore. Prime Minister Goh responded, "We can understand that because we also give travel advisories to Singaporeans not to go to the affected places. So we must expect other countries to advise their travellers not to come to Singapore … If we are open about it and all Singaporeans cooperate by being as careful as they can, we may be able to break this cycle early and if we do then of course people outside will have confidence in Singapore and the way we manage the problem …
>
> The same day WHO lifted Canada's travel warning, the international health agency said that the worst of Singapore's SARS outbreak seemed to be over. Singapore health ministry spokeswoman Eunice Teo responded, masterfully, by moving to the fulcrum of the risk communication seesaw. "The WHO said the peak is over in Singapore," she noted, "but our minister has said it is too early to tell.
>
> In this and many other examples, Singapore has occupied the middle ground between people's fears on one side and tentative medical reassurance on the other. This generates more credibility and confidence than Canada's angry protests and premature celebrations. Canada's foreign stakeholders (and in

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[45] *SARS Public Hearings*, October 1, 2003, pp. 30-1.

[46] Robarts Centre for Canadian Studies, *Media Coverage of the 2003 Toronto SARS Outbreak*, (York University, Toronto; October 29, 2003). The authors of the study examined more than 2,600 Canadian and American newspaper articles and performed detailed content analysis of just over 1,600 SARS related articles in the Toronto Star, the Globe and Mail, the National Post, USA Today and the New York Times. (Subsequent references will refer this study as Robarts Centre Report.)

[47] Robarts Centre Report, p. 16.

[48] Sandman helped the CDC upgrade its crisis communication capabilities following the anthrax attack in 2001.

> private, even its own citizens) are likely to sit on the worried, distrustful seat of the risk communication seesaw, since Canada is occupying the over-reassuring, over-confident seat.[49]

Rudolph Giuliani set what many believe is the standard for effective crisis communication in the aftermath of the Twin Towers attack. His key messages were a thoughtful balance of empathy and strong leadership. Asked about the precise number of victims – a difficult question to answer in the middle of a crisis – Giuliani simply replied: "More than we can bear." Much contributed to Giuliani's success. There was no confusion about who was the spokesperson in the crisis. Giuliani was the central focus – the single voice. His carefully crafted messages were as resonant and empathetic to the citizens of New York as they were to the myriad audiences watching around the world. Giuliani also benefited from a communication strategy that had been tested during New York's West Nile Virus outbreak in 2000 – a response that some experts called:

> … far-reaching, resource intensive, competently handled and effective.[50]

To be sure, a public health crisis is quite different from a single-episode disaster like the Twin Towers tragedy or an airplane crash. A public health crisis can unfold over a much longer time frame. It is usually characterized by unknowns and intangibles. It evokes sustained and quite reasonable responses of fear. It generates heightened stress levels. And it severely strains community bonds and relationships.

Above all, a public health crisis creates a strong demand for credible public information. That is why a public health communication strategy is so important. Not surprisingly, public communication is an integral part of the federal government's Canadian Pandemic Influenza Plan released in February 2004.[51] It set out a number of considered strategic considerations:

> Canadians are unlikely to distinguish between levels of government in the event of a health emergency. Public communications among all involved organisations must be coordinated and consistent.
>
> Public Communications around an influenza pandemic will occur in the international context. Key audiences, especially the media, will access various information sources from around the globe including the World Health Organisation. Communications channels must be opened with the WHO, HHS [the U.S. Department of Health and Human Services] and the CDC to

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[49] Lanard, Jody and Sandman, Peter, "SARS Communication: What Singapore Is Doing Right," May 2003.

[50] Covello, Vincent T., Peters, Richard G., Wojtecki, Joseph G. and Hyde, Richard C., "Risk Communication, the West Nile Virus Epidemic and Bio-terrorism: Responding to the Communications Challenges Posed by the Intentional or Unintentional Release of a Pathogen in an Urban Setting," in *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, Volume 78, No. 2, June 2001, p.10.

[51] Health Canada, *Canadian Pandemic Influenza Plan*, (Ottawa: February 2004), Annex K - "Canadian Pandemic Influenza Plan: Communications Annex," pp. 421-428.

> ensure an ongoing exchange of information, key messages and information products.
>
> Canadians will turn to various sources to obtain the information they need and want during a pandemic scenario ...[52]

The federal pandemic plan appears to take the view that in an open society a perceived lack of candor during an outbreak can have negative consequences.

The principle of openness was referred to by former Health Minister Tony Clement who told the Commission that he decided during SARS to provide as much information as possible to the public:

> Very early on, I decided, you have to make a decision, a decision how you are going to treat this with the public and there is always advice to play it down, there is no problem, we have a little problem at Scarborough hospital, let us not create a sense of panic in the public. I rejected that advice to this extent, I believed that what would create a greater sense of panic in the public is a lack of information given the fact that death was occurring and so very early on, even before the state of emergency was issued, I made a deliberate conclusion that we were going to give the public as much as information that we had on a real time basis, even on a daily basis in order that they knew exactly what we knew. And Dr. Schabas has been critical of that but I think that it was the right thing to do and I would do it again because the alternative is to hide information from the public and I think that would create more of a problem. It would create a problem of credibility with the government and the public health officials and it would create a problem of assuming far worse than potentially was the case which would fan panic than actually contain the panic. So yes, guilty as charged, we communicated with the public at every opportunity and I think that was the right thing to do ...

Unfortunately, Ontario had neither a public health communication strategy, nor, as a default, a pandemic response plan with an integrated communication component. As with much else during SARS public communication tended to be improvised. Despite the best intentions and efforts of those involved in managing the outbreak, public information was hampered by systemic weaknesses.

Unlike the focused strategy of New York City following 9/11, many voices were heard during the more than 40 news conferences held in Toronto. Spokespersons included Drs. D'Cunha, Young and Basrur. Dr. Donald Low of Mount Sinai sometimes participated in the news conferences. And there were spokespersons from the political arena like then Health Minister Tony Clement and former Toronto Mayor Mel Lastman.

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[52] Health Canada, *Canadian Pandemic Influenza Plan*, (Ottawa: February 2004), p. 421.

Those who criticize the handling of communications during SARS say it was wrong to have this multitude of public voices. Mr. Clement on the other hand said that this multiplicity of voices had merit since it ensured that the public had full access to relevant information:

> You do not have credibility by hiding or hoarding information and that sometimes meant that you had a panel of people that might have had a different view. For example, Dr. Low sometimes was off this way, Dr. D'Cunha was off this way and Dr. Young was here. That is the price of being upfront with people and I think that people are not used to that but I think that was the right thing to do and it actually set the tone of how we dealt with the power blackout and other things …
>
> It was an international story. You could not manage the news down even if you had wanted to. Even if you had tried to, they would have found a story every day.

Asked whether it would be better to have a communications model where there was one single spokesperson, Mr. Clement said:

> It is not going to work that way. If the spokesperson is too much of a spokesperson, that is to say, here is the line of the day and here are the facts of the day, immediately from the press conference they will rush out to Mount Sinai and find Don Low. They will find Allison McGeer. If Don Low was not there, they would have invented Don Low. I am being a bit dramatic here but you get my point. I understand what you are saying but trust me on this, the media does not work that way and they cannot be managed that way. You would be foolish to even try.

However, some critics complained that there was a perceived lack of a central official voice. As Tom Closson, President and CEO of the University Health Network, told the Commission's public hearings:

> … during SARS, was the fact that, there wasn't enough attention given to unified communication.
>
> We would see infectious diseases specialists being interviewed as being part of the POC. We'd see them being interviewed as representing their hospitals. We'd see them as being interviewed as, maybe, representing themselves and there's a lot of conflicting information going around.
>
> Again, if we were a single region, we would have had a unified approach and had a single communicator and tried to get all the infectious diseases specialists in a room and get them to be giving a common – a common view. Fighting it out in public is not really the best way to instill confidence. I'll tell you, our staff were quite frightened during SARS because they heard different things from different people and unified communication was

> necessary and it would have benefited from a more unified regional structure.[53]

This point of view was echoed by a submission to the Naylor committee signed by the presidents or chief executives of nine major health care groups argued:

> During a crisis or emergency, the public will quickly begin to look for a trusted and consistent source of information. However, during the early days of the SARS crisis, in Toronto, there were occasions when several different public health officials were being quoted and had titles attributed to them that appeared to indicate they were responding in an acting capacity only and not as an 'official.' This had the potential to leave an impression with the public that no one with any authority was in control.[54]

While the submission to the Naylor committee described this as a problem early in the outbreak, there are indications it persisted long after, including at a critical news conference on May 23, 2003 to announce a new – and very troubling – outbreak at North York General.

Before discussing this event, it is important to note that the Commission does not criticize the participants at this news conference or their intentions. One of the central spokesmen on May 23 was Dr. Low, exhausted after spending a troubling day at North York General reviewing cases files and concluding there was a fresh outbreak. Other key panelists, including Drs. D'Cunha and Yaffe, had labored tirelessly for more than two months. The May 23 news conference is mentioned here not from the perspective of perfect hindsight, but rather as a means of identifying systemic weaknesses. More will be said in the final report about the communication of this information to front line nursing and other health care staff.

The event began with a briefing by Drs. D'Cunha and Jaffe. It was not until the floor was opened to media questions that a reporter asked about North York General. Dr. D'Cunha answered:

> There are a couple of people under investigation.

Then, he turned the floor over to Dr. Low, who dropped what one reporter called "a bit of a bombshell" and announced the new outbreak:

> It's been a rough day at North York. I don't have all the answers for you tonight but what we've essentially identified is a cluster of cases that occurred on one ward at North York General … That there has been a likely transmission to health care workers. That there has been transmission to family members. And that there's probably been transmission to other patients.

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[53] *SARS Public Hearings*, October 1, 2003, p. 200.

[54] Naylor Report, p. 32.

After Dr. Low suggested that this cluster numbered "in the 20s," an angry reporter asked:

> In the twenties. Okay. Why did you just go through thus whole presentation for 20 minutes and we had to get it in a question? Why didn't you tell us at the start?

Dr. Low, who had worked diligently all day to get to the bottom of new troubling outbreak, was placed in the uncomfortable and unfair position of answering for systemic deficiencies in the uncoordinated flow of information.

The confusion that marked the May 23 press conference exemplified the lack of any coherent communications strategy and the lack of any clear lines of accountability for the communication to the public of vital news about the status of the outbreak.

The Robarts Centre study also suggested that public communication was hampered by competing agendas among stakeholders affected by SARS:

> In the SARS crisis, the media was a key tool used by stakeholder groups to advance their agendas. Public health officials used the media to communicate the severity of SARS, and the need for citizens to respect the quarantine measures. The business community used the media to communicate the severity of their economic plight. The Ontario Government used the media in their efforts to extract compensation from the Federal Government. In turn, the Federal Government used the media, most notably during its dispute with the World Health Organization, to show that they were actively working on the SARS issue. In addition to reporting the events of the crisis as they unfolded, the media was also a key part of each group's communication strategy.
>
> Competing stakeholder groups worked to capture the sympathy and attention of the media in order to advance their own agendas. During the SARS crisis, the objectives of the affected stakeholder groups were increasingly at cross-purposes to one another. In order to contain the outbreak, public health officials had to communicate the message that SARS was a serious threat. The message that SARS was a serious threat scared visitors away from tourist sites and Asian businesses in Toronto. The public health message and the economic recovery message worked at cross purposes, competing with and undermining each other at key moments.[55]

This lack of coordination was also cited in a paper by Christopher Finlay, a doctoral candidate and lecturer at the Annenberg School for Communication at the University of Pennsylvania:

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[55] Robarts Centre Report, pp. 14-15.

> SARS was not a Canadian disease. SARS was a global disease that caught the attention of the world. WHO and the American CDC both communicated their SARS messages to the world. Four [Public Health Agency] voices [i.e., Ontario, Ottawa, WHO and CDC], that did not always agree, could be heard during the peak of the Toronto SARS outbreak. Those on the receiving end, whether they were average citizens or the media, had to basically fend for themselves and decide who they were going to listen to. It is essential that PHA's of all levels work together when faced with a disease such as SARS. Coordinated messages can save lives. Confused and conflicting messages can cause panic and spread misinformation.[56]

If there is one important lesson, it is embodied in a recommendation made by the Registered Nurses Association of Ontario at the Commission's public hearings:

> Establish and maintain an effective communication network as a key component of an emergency preparedness plan. This network should link government, health providers, professional organizations, unions, higher education institutions and the public.[57]

The problems of public communication during SARS are addressed thoughtfully in the Naylor Report and the Walker Interim Report. The Commission endorses their findings and their recommendations for the development of coherent public communication strategies for public health emergencies.

There is no easy answer to the public health communications problems that arose during SARS. On the one hand, if there are too many uncoordinated official spokespeople the public ends up with a series of confusing mixed messages. On the other hand, as Mr. Clement points out above, any attempt to manage the news by stifling important sources of information will not only fail but will also lead to a loss of public confidence and a feeling among the public that they are not getting the straight goods or the whole story. What is needed is a pre-planned public health communications strategy that avoids either of these extremes.

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[56] Finlay, Christopher, *The Toronto Syndrome: SARS, Risk Communication and the Flow of Information*, p. 15. The paper was presented at the Transformations in Politics, Culture and Society Conference, which was held in December 2003 in Vienna, Austria.

[57] *SARS Public Hearings*, September 29, 2003, p. 28.

Problem 7: Poor Coordination with Federal Government

Problems with the collection, analysis and sharing of data beset the effort to combat SARS. While many factors contributed to this, strained relations between the three levels of government did not help matters.

As noted in the Naylor Report:

> Dr. D'Cunha stated that protection of patient confidentiality constrained his ability to release data to Health Canada. Senior GTA public health physicians took the same view of their obligations to share data with the Ontario Public Health Branch. Health Canada informants in turn argued that they never wanted personal identifiers, simply more detail to meet WHO reporting requirements. Multiple informants noted that relationships among the public health officials at the three levels of government were dysfunctional.
>
> A memorandum of understanding on data sharing was never finalized between the province and the federal government. High-level public health officials in Ontario and Health Canada have since given the Committee sharply divergent views on how well information flowed with respect to both its timeliness and adequacy. It is clear that at points during the outbreak, Dr. Arlene King of Health Canada dealt directly with Dr. Johnson and local public health officials to acquire the more detailed data necessary for discussions with WHO. Local public health units in turn faced pressure from the Ontario Public Health Branch to send on data for press conferences, for reports to Health Canada, or both.[58]

These findings are confirmed by the evidence examined by the Commission to date.

One would have expected the federal and provincial governments to iron out seamlessly and immediately the problems around data sharing protocols, processes and procedures. Sadly, this was not the case. The failure to iron out these problems is evidenced by an exchange of letters in late May 2003 – just as the second phase of the outbreak, known as SARS II, was making headlines.

On May 26, 2003, J. Scott Broughton, the Assistant Deputy Health Minister, wrote to Dr. D'Cunha:

> Further the discussion this morning among yourself, Paul Gully and Arlene King, I believe there is a need to confirm the process by which Ontario officially advises Health Canada of status of the Severe Acute Respiratory Syndrome (SARS) circumstances (e.g. outbreaks) in Ontario. As you know,

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[58] Naylor Report, p. 29

> it is critical that Health Canada have timely information in order to meet our national and international obligations.

Two days later, Dr. D'Cunha replied, in part:

> Thank you for your letter of May 24, 2003 and our subsequent discussion on May 25th. This will confirm our understanding that the process of daily updating Health Canada at 12 noon which has been in place since the beginning of the SARS outbreak will continue.

One does not have to read very far between the lines to see that these "for the record" letters reflect a serious problem. The mere fact that the federal government found it necessary to formalize its position in writing reflects an obvious breakdown in the informal and cooperative procedures that should have prevailed. One federal official described the background of these letters in terms that yield a picture of many problems coming together at the same time:

> The challenge for us, nationally, was to have as much information as possible and as much information as possible that had been analyzed by Ontario, at least initially, in order to ensure that we had as complete a picture as possible of the situation in Canada, primarily in Ontario, in order that we could then share that information with other countries and with WHO, in order to be able to demonstrate that we were responding appropriately. The challenge for us always was we weren't convinced that we had all the information that existed in Ontario in order to be able to put that picture together. The challenge was, and it continued, was not really knowing what information existed. And a more general comment really is that, I don't think we really ever felt that we were working in true partnership with the Province. If it had been clear from Dr. D'Cunha what information he did have, what information he didn't have, what he couldn't collect, what he was not able to analyze, what was not coming to him from the Cities, from Toronto primarily, from the other Health Units, what they weren't able to collect, what they weren't able to analyze, then we would have been much more comfortable, maybe much more uncomfortable, but at least we would have know what did not exist and did not exist as a result of what. Either a lack of an information system at the Province, lack of an information system at the City level, the Municipality level, a lack of expertise, a capacity to analyze information, and so on. And therefore, the letter from Scott Broughton was really, one thing to be reassured that we had it all and we had it all there in a timely way. Unfortunately … we continued to learn information, often as a result of the press conferences that Ontario had every day, which we were really not aware of through that sort of sharing of basic information at noon every day. It was more the analysis of what was going on, what the deficiencies were, what we didn't know, what Ontario didn't know, that was important to us. Which is more than just sending information. And it was this lack of, lack of feeling of partnership, that we were all in it together, that we were trying to work together as efficiently and effectively as possible, that

> was often not there. So, I mean, that's a very subjective way of putting it, but really that was what was behind the letter. And the response from Colin D'Cunha saying, well we will carry on doing what we've been doing, you will have the information that I have, really was not the level of detail and discussion that we would have liked to have had …
>
> And we continued to get the impression that the counter-response we got from Colin D'Cunha formally in that letter, you will have that information each day at 12:00 as you always have done, was not the sense of a collaborative working relationship, which really, I think we all needed to have. Now, as I said, it would have been gratifying if we'd known precisely what the situation was in Ontario and why. That would be fine, if it was a deficiency, and I think Sheela Basrur demonstrated quite clearly, as to what deficiencies were, what she could and could not do. Unfortunately, we never got that kind of overall assessment from Colin D'Cunha.

As noted above, Dr. D'Cunha's recollection was that he always shared and never withheld information. Mr. Clement remains convinced that the province did everything it could to share information with the federal government. He told the Commission:

> We felt that we were giving all of the information that we had available to us in an immediate way. But we were unaware of exactly how that was being transmitted to the WHO, or the requirements of the WHO for the type of information required, so that the breakdown in communication was in fact Health Canada not telling us exactly what the information was needed for and how it should have been presented, so that's the first thing. The second thing is that I make no bones about being frustrated with the federal government, with Health Canada in particular. Not with the Minister but with the bureaucracy, and the Minister has to take responsibility for her bureaucracy because they didn't take the situation seriously. They didn't take it seriously at our borders, they didn't take it seriously in terms of the requirements that we needed in terms of resources. That's a matter of public record …
>
> All I can tell you is that we were providing information on a daily basis, if not multiples of that, and that was continuing from the very beginning, that was my understanding …
>
> I do want to say without hesitation we gave all information to Health Canada in a timely way …

There are sincerely held views on each side; the province thinking it was providing all it could and the federal government thinking otherwise. Apart from any underlying problems of attitude, there was an obvious breakdown in communication, which is hardly surprising given the inherent difficulties of federal-provincial cooperation and the complete lack of any preparedness or any existing system to ensure an effective flow of information in a time of crisis.

This analysis is supported by the anecdotal recollection of others involved in the outbreak. There was a damaging combination of problems: lack of information systems, lack of preparedness, lack of any federal-provincial machinery of agreements and protocols to ensure cooperation, all possibly overlaid by a lack of cooperative, collaborative spirit in some aspects of the Ontario response.

The federal official quoted above described the impact of this lack of collaborative information flow, suggesting it may have affected the international community's perspective of how well the outbreak in Ontario was being handled:

> What we were lacking, as a result of whatever, in Ontario, was a real sense that they, that Ontario was able to present a daily picture in a dynamic sense of what was occurring, over and above just the figures. And if we attempted to do that, which is what we did do, unfortunately, it's another aspect of our relationship which I mentioned before, the lack of a clear message every day from Ontario, because there were numerous spokespersons, never sort of confirmed, was never able to basically support what our suppositions were, however late they ended up being because of lack of information. And that inevitably led to a sense of confusion in the outside world, WHO and other countries, as to how far we had this under control.

The lack of coordination with the federal government did not start with SARS. For years the message that some public health physicians in the Branch perceived from Dr. D'Cunha was that they should not share information with their federal counterparts. One physician who provided research findings to Health Canada as part of a national investigation was criticized for doing so and the impression developed among the Branch physicians that Dr. D'Cunha wanted "no contact with the feds" and that interaction between the provincial Branch and Health Canada was discouraged. Again the issue is not what Dr. D'Cunha actually said, but the impression picked up by public health physicians in the Branch, that cooperation with the federal government was discouraged rather than encouraged.

It is worth noting, for the sake of balance, that as early as 1999 the Auditor General of Canada had raised concerns with Health Canada about a lack of formal procedures with the provinces for collecting and exchanging data on communicable diseases. The 1999 report of the Auditor General noted that Health Canada:

> … drafted a memorandum of understanding covering the exchange of data on these diseases some 10 years ago, but this was never finalized with the provinces and territories. Currently, provinces and territories report cases of nationally reportable communicable diseases to [the Laboratory Centre for Disease Control ("LCDC")] on a solely voluntary basis, and they submit the data according to different criteria. For example, information on tuberculosis that LCDC receives (and then presents) is based on the date of onset of illness in Ontario but the date of diagnosis in all other provinces.

> This makes it difficult to compile a national picture of how many people have tuberculosis and for how long they have been infected.[59]

> Without formal procedures, noted the Auditor General, Canada was vulnerable: Clearly, comparable surveillance data are essential to estimate the size of a health problem and to determine its economic burden on society, to characterize trends, and to evaluate intervention and prevention programs. Deficiencies in our national health surveillance information also affect Health Canada's ability to provide valid information for use internationally to address global issues of disease control.[60]

Consequently, the Auditor General made the following recommendation in 1999:

> Health Canada should work with provinces and territories to establish common standards and protocols for classifying, collecting and reporting data on communicable diseases.[61]

However, when the Auditor General revisited the issue in 2002, it found that Health Canada was slow to address the concerns raised in 1999:

> 2.29 Lack of agreement on data sharing between Health Canada and the provinces and territories. Disease information is the property of the provinces and territories. To ensure that this information is shared appropriately and that the *Privacy Act* is not violated, the details of data sharing need to be outlined clearly in written agreements. Agreements on data collection need to cover such details as how the data will be used, who owns the data, what standards will be followed, and how privacy and confidentiality will be protected. Agreements on data dissemination need to cover such details as what information can be published and who can receive it. Finally, each agreement should outline the consequences of not respecting it.
>
> 2.30 At present, only a few agreements on data sharing exist (for example, on HIV/AIDS), and no generic agreement has been developed to ensure that all important details are covered. Since much of Health Canada's disease information comes from other partners, any agreements would need to clearly outline the responsibilities of all partners in the sharing of that information.
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> 2.31 Health Canada slow to develop common standards for data to be shared. We recommended in 1999 that Health Canada establish common

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[59] Auditor General of Canada, *1999 Annual Report*, (Ottawa: November 30, 1999) pp. 14-15 – 14-16.

[60] Auditor General of Canada, *1999 Annual Report*, (Ottawa: November 30, 1999) p. 14-16.

[61] Auditor General of Canada, *1999 Annual Report*, (Ottawa: November 30, 1999) p. 14-17.

> standards and protocols for classifying, collecting, and reporting data on communicable diseases.
>
> 2.32 Common or uniform standards and protocols are critical to ensuring that disease information is consistent. Consistency is important because national health surveillance involves integrating information so it can be analyzed on a national basis. Our follow-up found only limited progress on the development of common standards. The Communicable Disease Surveillance Sub-Group has begun developing standards for nationally reportable diseases, immunization information, and vaccine-associated adverse events (bad reactions to a vaccine). Progress has been made on the development of standards for data elements and the core data set (the set of data elements that are common to all diseases—for example, gender, and date of onset of illness). However, only very limited progress has been made on elaborating disease-specific data sets (for example, defining the symptoms of a specific disease) and laboratory standards (such as which lab test to use).
>
> 2.33 Once standards have been developed, agreement on them must be reached. We found that there is no national agreement on a mechanism for maintaining or approving standards on behalf of all the partners. Without this mechanism, Health Canada has no way of ensuring that common standards are respected.[62]

As a result, the Auditor General made a recommendation in 2002 strikingly similar to the one of three years earlier:

> Health Canada should work with provinces and territories to obtain agreement on the sharing of disease information, including agreement on data collection, data dissemination, data standards, and the list of diseases that should be reported nationally. Further, it should work with the provinces and territories to create a mechanism for maintaining and accepting data standards.[63]

While these pre-SARS recommendations were obviously not SARS-specific, they do address the framework of machinery under which information would have been exchanged during SARS, if only the machinery had been in place. It is unfortunate that the recommendation of the federal Auditor General, beginning in 1999 and continuing until the year before SARS, were not followed.

The Auditor General's comments speak for themselves in respect of the lack of progress at the federal level. But Ontario had an equal obligation to work towards an effective federal provincial framework for the exchange of infectious disease information.

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[62] Auditor General of Canada, *2002 Annual Report*, (Ottawa: October 8, 2002) Chapter 2, p. 8

[63] Auditor General of Canada, *2002 Annual Report*, (Ottawa: October 8, 2002) Chapter 2, p. 9

It is most regrettable that effective machinery was not in place during SARS to ensure the necessary flow of information needed so badly by the federal government to discharge its national and international obligations. It is clearly incumbent on both levels of government to ensure that the breakdown that occurred during SARS does not happen again.

The key to effective federal-provincial cooperation is to recognize the provincial responsibility for delivering public health services and the federal role in assisting the provinces and developing partnerships around information sharing and other aspects of disease surveillance and outbreak management. One senior federal official put it very well:

> To me the responsibility for public health is at the local level, which then, quite appropriately, are people acting under Provincial jurisdiction. My view is that Health Canada is there to look at the wider interest in Canada, and one, to ensure that the expertise comes to play to assist the Province or Provinces involved in an outbreak, to add to that, to add to what's necessary in terms of lab support, epidemiologic investigation and so on, and so forth. And unless the Federal government wishes to take some jurisdiction away from the Provincial government, which I'm not saying it does, and I personally don't feel that's necessary, I think we can carry on with our separate roles, but in partnership. To me, the Federal government has a part to play in communicable disease control and response, emergency response. Obviously the Provinces and Territories do too. And I believe we can, maybe we have to set up more, firmer agreements to share information, especially during times of emergencies and so on and so forth. That's in order for us to do our job. And I think to help the Provinces and Territories do their job. But that's just one part of the way you work in a federation. It's more about developing a Public Health strategy and programs for the country with all the different partners involved, rather than necessarily changing jurisdiction or jurisdictional responsibility.

These comments resonate strongly with the Naylor recommendations for new federal-provincial partnerships in public health. Few things more sensible have been said about what needs to be done.

Effective federal provincial cooperation requires more than this positive attitude recently demonstrated by Ontario. It requires determination, patience, hard work, and a sense of urgency. The strength of the government's commitment will be measured by the progress that is achieved in the months ahead.

A senior federal official, asked if the federal-provincial communications problems were finally being addressed, and whether outbreak control would in the future work in a more collaborative way, said this:

> I believe it would work in a more collaborative way. I can't speak for how improved the systems are in Ontario. Obviously we're trying to work with Ontario as much as we can to assist them to improve their systems, but in terms of collaboration, I believe that there is a greater sense of collaboration

> with Ontario now, and a great willingness to really discuss what the issues are.

To conclude, the lack of federal-provincial cooperation was a serious problem during SARS. This lack of cooperation prevented the timely transmission from the Ontario Public Health branch of vital SARS information needed by Ottawa to fulfill its national and international obligations. Underlying the problem was a lack of pre-existing protocols, agreements, and other machinery to ensure the seamless flow of necessary information and analysis, combined with a possible lack of collaborative spirit in some aspects of the Ontario response. The inherent tensions between the federal and provincial governments must be overcome by a spirit of cooperation around infectious disease surveillance and coupled with the necessary machinery to ensure in advance that the vital information will flow without delay. It is clearly incumbent on both levels of government to ensure that the breakdown that occurred during SARS does not happen again.

Problem 8: A Dysfunctional Public Health Branch

In addition to the problems set out above, the Commission has heard consistent reports that the Public Health Branch of the Ministry of Health had become dysfunctional both internally and in terms of its relationships with the local public health units.

One Medical Officer of Health thought the problems of the Branch during SARS resulted from a long and gradual process of decline over many years:

> Over the last 15 to 20 years, I have observed a gradual disintegration of the Public Health Branch. A number of years ago, we benefited from the presence of area medical officers and a number of consultants at the Public Health Branch we could reach almost anytime for advice. Advice was given freely and these people seemed to be well disconnected from any political process. Over time, the number of staff or their availability has greatly decreased and their opinions are always guarded, that is if they do hazard a clear opinion. The Public Health Branch needs to be beefed up and the staff needs to feel free to express their professional opinion without fear of retribution …

To some outsiders who worked at the Branch during the crisis, it seemed that for the Branch as an organization it was business as usual, with many of the regular Branch employees working 8:30-4:30 days while the outside volunteers were working 20-hour days:

> Most of the staff, when I talked to them on the 8th floor, they felt SARS was separate from them, which was fascinating cause when you go to the health units everybody was pulled into SARS … We were seen as a separate SARS group that was brought in, we didn't t get the sense of people in the branch coming in and joining in with us. It fit with the lack of a structure.

One observer described the Branch as "the most disheartening place I have ever worked."

Some expressed concerns that the Branch seemed to spend much of its time preparing briefing notes:

> … there were things that were happening that made no sense at all, like having to do the same briefing note 10 times and no direction provided about what should be changed so there was a lot of busy work going on at the expense of things like guideline development and more meaningful public health activities.

The relationship between the Public Health Branch and the local public health units was sometimes problematic. Many local health units felt the Branch had high expectations of the local units, but provided little or no corresponding support. As one local Medical Officer of Health stated:

> You cannot do anything wrong or have any kind of hint error. That was particularly in SARS where, I think as the relationships with the Branch and Colin, in particular deteriorated further. I felt that there was a possibility of health units being scapegoated.

The dysfunctional relationship between the Public Health Branch and the local units was observed by many prior to SARS and was known to many in Ontario and elsewhere. One local Medical Officer of Health stated:

> They've [the other Medical Officers of Health] been very unhappy with our relationship with the Public Health Branch for a long time. We've tried to make it as constructive as we can. We've tried to separate personality from other things. We've tried to give the Branch credit, give Colin credit. But we've been very concerned about this.

The lack of collaboration and information sharing felt by the local health units before SARS can be seen in the context of pandemic flu planning. In August 2001, Health Canada provided the Chief Medical Officer of Health in all provinces and territories with access to the federal pandemic plan website. Although the document was in draft form and was to be treated as confidential, the federal government had given explicit permission for the Chief Medical Officers of Health to share the password at their discretion.[64] Yet local public health units in Ontario did not immediately receive the password and it was only through the efforts and hard work of others that the passwords were ultimately released to the field almost two months later.

One local Medical Officer of Health expressed their frustration:

> The federal [pandemic] plan in its draft version, with many, many annexes, many excellent annexes about how to enlarge your hospital capacity, how to get extra staff, all those pieces, became available on a private website. And that website address was sent out to provinces, and they were advised that they could share it with people who needed it for planning purposes. It [took] several months and a lot of letters back and forth from Health Canada to our province, until they were able to send that password out to local Medical Officers of Health. It was not the sort of information sharing that was seen as relevant and it was really a very difficult exercise to get that to happen … it took a lot of work behind the scenes. The people at Health Canada, wrote one or two extra letters, and their lawyer phoned, and all sorts of things were done to try and get this to happen. And Colin would just say, well, the letter here says I'm not supposed to do it. But Colin, all the other provinces have, and they tell me you can, and it was just sort of crazy. The sad news is that the password was changed about eight months ago. That

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[64] The memorandum from Health Canada announcing that the federal pandemic influenza private website was operational stated "In each P/T the office of the Chief Medical Officer of Health is responsible for releasing the site on a "need to know" basis and will retain a list of people who have received the password.

> information was sent out to [Chief Medical Officers of Health] and we still don't have the new password. So, now, at this point, there are hugely relevant documents. They've gone through a lot more development in the past two years, and local Public Health units, in Ontario at least, have not ever seen that information, which we desperately need for our planning. Because a lot of it would help us with SARS planning. I just find that sad.

It was incumbent on the province to ensure that this vital information was shared with local public health units, instead of blocking their access to it.

One expert from outside the province noted the widespread perception of problems in the branch:

> Many of us, maybe most of us in the public health community across Canada have recognized that Ontario in particular had a pretty fragmented and not very functional public health system in terms of coordination. And what we were hearing at least what I was taking from the teleconferences that were going on almost daily reinforced those kinds of observations.

Another outside expert who worked with both Toronto Public Health and the provincial Public Health Branch described the impact of the dysfunctional relationship as follows:

> I would like to say that if the SARS outbreak had happened in a different province with a different city or within the same province in a different city, that the flow of information would probably have been better. I think that there were some and this is my own personal opinion, there were some pre-existing relationships that made that flow of information more difficult … I do not know what was going on but you certainly get a feel for people and when you walk into the room you can feel tension or no tension and when I was there, I got the personal kind of gut feeling that there was some tension between the relationship between the City of Toronto public health and the Ontario Ministry of Health and I could not, I do not know who it was or if it was a group or you just got a feeling that there was some tension between those relationship. The relationship between the people at the City of Toronto public health and people at the Ministry of Health were tense and there was not that, there was not a lot of talking to each other going on unless it was absolutely necessary. It was sort of the feeling that I got but of course I was not involved in, I never witnesses anything like that, it was just a sense or feeling of that tension which I am sure that you have experience when two people who do not like each other in the room, you kind of sense that even if you did not know that the two people did not like each other. It is just sort of a sense that there was some tension between those two bodies of the whole.

The problems within the Public Health Branch and the dysfunctional relationship between the local public health units and the Branch impacted negatively not only on the flow of information and the working atmosphere, but also on the ability of public health in Ontario to attract and retain experts. During a teleconference call, one witness reported hearing concerns about coming to work at the branch in Ontario:

> I remember being on a call where the Ontario folk, someone was pleading for assistance into Ontario Public Health system from other provinces and territories, people to come to help. And got a very cool response. And I added my pleas to this and then one of them said, look guys, you know why we're not sending people to Ontario. We cannot send them to work in the Public Health Branch, because we know what it's like.

The same feeling was expressed within Ontario and confirmed by a federal official. As one Medical Officer of Health said:

> There is absolutely no respect for the Public Health Branch; we don't turn to them for expertise or advice, we turn to our colleagues in the field; the Branch sends us internet links to Health Canada and CDC and WHO that we can find ourselves, it's absolutely pathetic … a lot needs to happen before trust is restored.

A lack of respect for the Public Health Branch was evident in the responses from outside Ontario and from elements of the Ontario public health system at the local level. When SARS hit, leadership was not forthcoming from a Public Health Branch that turned out to be dysfunctional.

Problem 9: Lack of Central Public Health Coordination

Under the *Health Protection and Promotion Act*, local Medical Officers of Health were responsible for the local response to SARS. It was to the province however, to the Public Health Branch in the Ministry of Health, that the local public health units looked for guidance. Unfortunately many Medical Officers of Health felt there was no coordinated effort at the Public Health Branch to facilitate the SARS response at the local level. For many in the field it seemed as though the Branch was a silo, disconnected from the field, rather than a partner or a resource.

Many local public health units felt left to their own devices when it came to getting the vital information they needed to do their job during SARS. Although the provincial Public Health Branch did have daily teleconference calls with the local health units in the Greater Toronto Area, many did not regard it as an effective means of communication, as an effective forum for sharing vital information, or as a source of help for the local units. One local Medical Officer of Health described it as follows:

> The teleconferences that we were having on a daily basis I found to be partly useful. And I say partly because, in fact, the one problem with them was that the people that had the greatest experience with what was going on were never on the teleconferences because they were off doing something else or they were at the public news conference or they were trying to visibly do whatever to try and control the outbreak in their area. They were never available to us to provide us the first hand information about what was really going on so we in the field would know from the source. And as we had questions in the field from those teleconference, there was never anyone there that could answer them because they were off doing something else.

Another local health unit reported that the teleconferences, rather than providing help and guidance to local units, quickly turned into a forum for the province to press the local health units for details about their cases. The teleconferences did not fulfill the needs of the local health units for guidance and information. It was particularly frustrating for local public health units to report their information to the province during the teleconference, receiving little or nothing in return, only to be asked for the same information all over again shortly after the end of the teleconference. Said one Medical Officer of Health:

> [The teleconferences] seemed not to be beneficial to the branch either, because we'd get the same questions later.

One health unit reported that they eventually chose not to participate in the conference calls because they were of such little assistance:

> … we made the decision to stop participating in Medical Officer of Health teleconferences, in part because you'd wonder if this was going to be another source of information and we'd wonder whether it's going to be confrontational.

Many local health units felt the information and support provided by the Public Health Branch was inadequate.

One local Medical Officer of Health indicated that the information provided by the Public Health Branch lacked clarity and precision. It provided information that was often a confusing and sometimes contradictory amalgam drawn from a variety of sources:

> You probably heard there were disagreements between the Province and Health Canada. Well, imagine our predicament when you're trying to let your staff know what our key messages are, what our communications are to people, [what] our key messages are [to] physicians, communications, team managers.
>
> Imagine the troubles we faced trying to get the true – true bill. We got guidance with respect to the Public Health management of discharged cases … from the World Health Organization, nothing from the Province, nothing from Health Canada, and to this day we do not have any Provincial Public Health person contact name for the guidelines.

Some Medical Officers of Health got their crucial information from television or from the web site of the CDC. One Medical Officer of Health described the frustration:

> The other thing that I found that is very interesting was that one of the crucial pieces of information from my perspective about what was going on relating to the outbreak, I found out from my big [satellite] dish. So when CDC in Atlanta was having their educational sessions on SARS, I could go home and I could dial up and I could listen directly. One of the most crucial pieces of information about the cause of this spread of the disease within the Toronto hospitals, was something that I learned from the CDC from one of those sessions. I did not learn it directly through the [Ontario Ministry of Health] teleconferences … I did not learn that internally through our system of information; I found that out from Atlanta through their educational session and I thought that kind of conveyed to me this problem with internal communication. In the field, we were not getting direct information from the people who most knew what was going on.

Another local health unit had to hire someone to review world media reports in order to get up-to-date information on the status of the outbreak:

> We knew we needed information officers, people to just sit in front of a computer and pull down the latest directives and the latest WHO stuff. I took out a paid subscription to the Hong Kong newspaper, because that's where all the information came from real fast.

There was a sense that individual local health units were on their own and that there was an absence of coordinated central support and information sharing.

Even when information that could be helpful to local units was generated, it was not always disseminated to the local public health units. Volunteers from the field developed a series of public health guidelines. One Medical Officer of Health noted that these guidelines were never posted nor widely distributed, leading some to wonder where they went:

> It was just that it became unconnected. None of the Public Health guidelines ever made it to a web site, just as an example. They never got posted … There were a whole series of these Public Health things that never quite officially got published … In many cases, they were drafts done up by the field rather than the Branch, but they did not get out on the official website.

SARS was not the first sign of the absence of central coordination at the public health branch. In 2003, the Provincial Auditor's Report revealed inconsistencies in approach among individual local health units in tuberculosis surveillance, putting the community at increased risk:

> Federal guidelines state that immigrants with inactive tuberculosis who are placed on medical surveillance should receive a complete medical examination, including an x-ray, after arriving in Canada. These individuals are required to obtain a letter from a local health unit verifying their compliance with federal requirements. However, according to the Ministry, the federal government only requires that the individuals contact a local health unit. Nine of the 21 local health units that provided letters indicated that they would do so as soon as the individual contacted them, regardless of whether they had had a physical examination or x-ray … [I]ssuing letters based on contact alone reduces a local health unit's ability to ensure compliance with federal guidelines and places the community at increased risk.[65]

This lack of central coordination was also reported in respect of the West Nile Virus cases. The failure of the system to learn from West Nile is noted below. The systemic problems of the Branch demonstrated during West Nile were the subject of comment in the Provincial Auditor's 2003 report. It pointed to the lack of direction from the Public Health Branch on the use of insecticide for which some funding was available from the province. The field guide produced by the Branch, which was supposed to be a clear action plan to guide local health units in their approach to West Nile gave no clear direction on the use of insecticides.

> While this Plan covered a wide range of areas, it did not state when local health units should consider the use of insecticides.
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> Instead, the Plan stated that, prior to using insecticides, local health units are required to conduct their own risk assessments, which should include factors

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[65] Provincial Auditor of Ontario, *2003 Annual Report*, (Toronto; December 2, 2003), p. 219.

> such as community attitudes towards the risks posed by WNv [West Nile virus] versus the likely benefits and risks of using insecticides.
>
> Notwithstanding this ministry guidance, most of the 37 local health units had to conduct their own research to determine best practices for when to use insecticides.
>
> In fact, many of the local health units we surveyed in April 2003 indicated that additional and more timely guidance on when to use insecticides was needed, and in 2002 none of the local health units carried out any insecticiding at all.[66]

Other aspects of the response to the West Nile virus, point to the lack of a central coordinated effort on behalf of the entire province. For example, during West Nile, a number of local Medical Officers of Health, frustrated at the lack of provincial leadership, set up their own network to plan and manage the surveillance response. One Medical Officer of Health recounted how they unsuccessfully begged the Branch to help:

> We begged through letters back and forth to have provincial leadership there – to get provincial guidelines to do things in a coordinated way and we kept being told no, that is not our role, you are in charge, and that we should organize ourselves.

Another Medical Officer of Health said that the local health units "screamed" to no avail for direction and support from the Public Health Branch in dealing with West Nile. Eventually, they took matters into their own hands and the local health units themselves called meetings to deal with West Nile.

In 2003, when SARS hit, the Public Health Branch was working on their 2003 West Nile response – but for many the help was coming too late, as the field had already banded together to coordinate their effort among themselves.

Many local Medical Officers of Health felt abandoned during SARS, devoid of support and guidance. This reflected the long-standing failures noted above. The Branch's failure to coordinate and guide the local health units was already a big problem before SARS. It turned out to be a harbinger of the problems that arose during SARS.

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[66] Provincial Auditor of Ontario, *2003 Annual Report*, (Toronto; December 2, 2003), p. 241.

Problem 10: Lack of Central Expertise

The outbreak was managed, of necessity, around the Public Health Branch of the Ministry of Health and Long-Term Care rather than through it. The critical mass of professional expertise one would expect in a crucial branch of government in a province the size of Ontario simply did not exist, either in the number of experts or their depth of experience. Key operational groups had to be put together on the run and individual experts had to be recruited from the field to fill this void. Vital pieces of machinery such as the Science Committee, and the Epi Unit, were run on almost a revolving door volunteer basis because there was no depth of expertise in the Branch itself.

Some regarded the lack of strategic capacity and expert leadership as a primary weakness during SARS. Dr. Richard Schabas, formerly the Chief Medical Officer of Health for Ontario, said this at the public hearings:

> I think the key weakness that the SARS outbreak pointed out in our public health system is a lack of strategic capacity, a lack of really expert leadership in a crisis situation at that time. We have – that capacity has been largely eroded at a provincial level over the past few years and there really was no acceptable alternative within public health.[67]

The Commission heard that over the years a number of bright knowledgeable people drifted away from the Ontario public health system for a number of reasons, including the work environment and a lack of support from above. There was a sense in recent years that bright, independent minded people were not particularly welcomed. As one expert from British Columbia who witnessed this migration of experts commented:

> We [British Columbia] benefited from it immensely because Ontario collectively has succeeded in driving away some of their particularly capable people and we have inherited them.

One such expert who had left the Public Health Branch told the Commission that but for the way they had been treated while at the Branch, they would have remained in Ontario.

The result of this lack of central expertise was felt in the public health field long before SARS hit. One Medical Officer of Health interviewed by the Commission described how local public health units banded together to support each other, since they felt the Public Health Branch was unable to provide the support they needed:

> We have been helping out for long, long time. For a few years. We have been almost providing shadow Public Health Branch services for a while … There have been a lot of things that the Public Health Branch has not been doing for us.

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[67] *SARS Commission Public Hearings*, September 30, 2003, p. 27

Over the years, as many senior experienced professionals left the Ontario public health system, the government failed to recruit comparable replacements. As one senior public health expert observed, the vacancies left by senior physicians and experts who left the branch were often filled by junior, inexperienced people:

> Many of the others had very little experience. The old-timers, who sort of knew the system and knew all the answers and worked on the federal committees and had all the networks, had retired or been moved. A lot of the … nurse epidemiologists that we had had and trained up had moved on. Many of them actually have moved to the federal government, and they ended up chairing the various federal working groups during SARS. So, and some of them still live in the Toronto area, but went to work for them instead. So, we've lost a lot of talent.

These observations do not detract from the fact that there are some superbly qualified experts in the Public Health Branch. Dr. Erika Bontovic, to take one example, has been singled out by many as someone who provided valuable help during SARS and there are others who made valuable contributions.

The problem was that there were simply too few senior experts and physicians experienced in communicable disease and outbreak management, including epidemiology. When SARS hit, there was no critical mass of seasoned physicians and public health experts in the Public Health Branch to whom the government could turn and trust to step in and do what needed to be done. As one expert observed:

> They certainly didn't have much depth back at the Branch to be able to do it with. Had no epidemiologic capacity for example, and very few public health physicians back there with any experience to be able to run a big outbreak. The Public Health Branch has been very little involved in the outbreaks. Any outbreaks before are handled by health units themselves. Or if they need coordination, typically coordinated by the health units themselves, with the Public Health Branch seldom involved in playing an overall coordinating role. So that was a real problem.

The Naylor Report noted that in the Ontario public health system "neither the analytical capacity nor the communications strategies were anywhere near optimal." The Walker Panel Interim Report has also recognized the deficiencies in the public health human resources, emphasizing the need to retain experienced individuals and recruit new blood.

There is a clear need to upgrade the professional environment within the Public Health Branch to attract and retain a critical mass of public health expertise and to retain what expertise currently exists. Professional development, collegiality, cooperation and mentorship must be fostered. The opportunities for public health professionals to build collaborative relationships with federal colleagues and colleagues in other provinces must be promoted, opportunities reported by many to be lacking for some time. Many in public health throughout the province and those who have left the province remarked how little support they saw for professional development and collegial collaboration. Many felt shut out of federal/provincial/territorial committees where Ontario chose not to be represented. One public health official described the problem as follows:

> So not only do we not have our good person who would like to be there, but we end up with no representation. They knew [Dr. D'Cunha] wouldn't let people come to things, people who had been signed on as speakers, who weren't allowed to go out. But they knew those things. But we were suffering on the federal/provincial thing. We certainly lost our credibility as a province that way. We were losing people. We were losing some our key people because they didn't want to work in the system. We weren't getting the expertise we needed when we called in, we were handling a lot of things ourselves on our list serve, or by calls to each other. You know, one person here is the expert in chronic disease prevention … someone else is the expert in something else. And so we were using our own network more and more and trying to avoid the Branch.

One public health official who left the Ontario system described how the Public Health Branch did not encourage Ontario's participation in national conferences and meetings, and how professional development was not promoted. This official contrasted the Ontario approach with the other provinces who actively promote and facilitate participation in federal committees and career-building opportunities:

> My [current employer] provided a lot of support to me in accepting that position [as chair of a federal committee] because they felt it was a high profile important thing both for me and [my current employer] to be providing that kind of support to a national committee.

An institutional culture that encourages scientific excellence and extra-provincial collaboration appeared absent from the Ontario Public Health Branch. For public health in Ontario to thrive it must be able provincially and locally to attract and retain the best and the brightest that our country and other countries have to offer. This can only be achieved by improving remuneration levels and the kind of professional culture that attracts the best people.

SARS demonstrated that our most valuable public health resources are human resources and that Ontario lacked a critical mass of expertise at the provincial level. It is crucial to the success of any public health reform initiatives in Ontario that there be a high level of expertise at both the local and central levels of public health. Ontario cannot continue to rely on the goodwill and volunteerism of others to protect us during an outbreak. Many of those who came forward to work at the provincial level during SARS were disheartened by the problems they saw and a few expressed doubts whether they would be willing to come forward again, particularly if the problems are not addressed. Examples abound of centres of excellence for disease control: British Columbia, Quebec, and Atlanta, among others. Ontario needs to learn from their example. Without a critical mass of the right professionals public health reform, no matter how well-reasoned and well-resourced, has no chance of success.

Problem 11: No Established Scientific Backup

In March 2003, the Public Health Branch in Ontario had neither the capacity nor the expertise to handle an outbreak of the magnitude of SARS. Neither was there any provincial plan to bring together rapidly the necessary experts to provide scientific advice to those managing the outbreak. One outside expert, brought in to help manage the crisis, noted that Ontario simply didn't have the machinery, people or the leadership at the central level:

> It was abundantly clear to everyone who sat in on teleconferences that Ontario was scrambling, didn't have the infection control expertise, at least the amount of expertise. There were superb infection control people there … it's clear they were unable to pull together the data that was required for them and us to try to understand what's going on. It was abundantly clear that there was no obvious concerted leadership of the outbreak at least as we could see … It was obvious to all of us that Ontario was in substantial trouble.

Consequently, the Ministry of Health had to turn to experts outside of government for advice and direction. While this is not unusual during an outbreak, the lack of planning meant that the core expert groups had to be thrown together in haste without adequate planning or organization.

On March 26th, the day the provincial emergency was declared, a Science Committee was formed at the request of the Commissioners of Public Health and Public Safety and Security (Dr. D'Cunha and Dr. Young). This ad hoc group of experts was known as the Scientific Advisory Committee, although it was also referred to variously as the Scientific Advisory Group, the Science Committee or the Science Group.

Over the weekend of March 27th to March 30th, a number of people were brought in to help. They were recruited by the existing members of the Science Committee, simply through a call asking them to come and help out. Many responded to appeals from Dr. Donald Low, Microbiologist-in-Chief at Mount Sinai Hospital, who used his cross-country network to good advantage. The Naylor Report famously called them "a human cell phone conglomerate."[68] Luckily, a group of volunteers – some from as far away as Saskatoon and Vancouver – dropped everything to come to Ontario's assistance.

Initially, the Science Committee consisted of a small group of volunteer experts, including those who had treated patients during the early days of the outbreak. As the Science Committee grew in number, it moved to the Minister's boardroom at the Ministry of Public Safety and Security, where it remained.[69] Their responsibilities were crucial. As one member of the Science Committee described their task:

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[68] Naylor Report, p. 30

[69] *SARS Commission Public Hearings*, October 1, 2003, pp. 83-84.

> There was an expectation on us to analyze the current epidemiology day-to-day and make a recommendation to the SARS operational executive or the provincial operations centre.

Despite the ad hoc way in which the Science Committee was started, it is an inspiring example of partnership and collegiality that so many experts agreed to come forward and that they worked so well together. Many were from outside Toronto and left their families for weeks on end. They worked long days, typically 10 to 14 hours or more. Their dedication and selflessness was remarkable. In an age when many professionals worry as much about personal risks and liabilities, such concerns fell by the wayside. As one member of the Committee told the Commission,

> were we covered, was there risk for me personally? Was my board insurance covering me? None of that was a part of this.

Petty budgetary concerns were also dismissed in the face of this new and ominous threat. One member of the Committee recalled that, at one point, her superiors asked:

> … was the province going to pay for this? My response was that it was a public health emergency and we need to do what is right in the short term. In the longer run, sort out who pays for what. If we do not get this sorted out provincially, it is not going to matter whether they pay or not.

What the Science Committee members found at first, however, was a lack of the necessary infrastructure that supports modern medical science. There was no established process to ensure the effective translation of their scientific conclusions into workable directives that could be sent directly to hospitals and understood by hospital administrators and health care workers.[70] In spite of all these problems the Science Committee did remarkable work under stressful and difficult conditions.

It is important to stress that the problems faced by the Science Committee are no reflection on the performance of the remarkable individuals who comprised it. Nor is it any reflection on the degree of support it received from the government once it got going.

Dr. Brian Schwartz, co-chair of the Science Committee, told the Commission during the Public Hearings that it received tremendous support from all levels of the Ministry of Health. The problems that it faced were not people problems or resource problems. The problems were caused by the fact that the Committee was cobbled together from nothing – with no infrastructure, no pre-existing body or structure, no clarity of roles or reporting relationships. This speaks to two underlying problems that arose again and again during SARS: the lack of a critical mass of expertise in the public health branch and the lack of planning.

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[70] The problems with the directives and communication of the directives will be dealt with in greater detail in the final report.

The fact that the Committee had to be established ad hoc created a variety of problems, outlined by the members of the Science Committee themselves, in a retrospective review of their role:

> The POC/OSSAC structure was created on the fly as the crisis was unfolding. The membership selection was inadequate for deciding in this situation who needed to be on the executive committee or the scientific advisory committee; in the same way that outbreak policies in hospitals are needed to lay out how decisions are made about who needs to be at the table and this needs to be at the table, the province needs a decision-making process about who (both internally and externally) needs to be at the table and this needs to be predetermined and somewhat generic so it is adaptable to the emergency situation at hand. – in this circumstance, the "science committee" appeared to be created ad hoc, and some important groups were missed initially.

The membership selection process left little room for consultation or reflection. Membership had to evolve as the outbreak progressed and needs were identified. As noted in the quote above, some important groups were missed. Those that were missed found it extremely difficult to gain access. For example, the Commission heard that Family Physicians Toronto had to "convince the powers that be" to include a family physician in the Science Committee. Dr. Schwartz, co-chair of the Science Committee, acknowledged this at the public hearings when he stated:

> We had limited, but not enough, communication with other stakeholders in hospitals, in physician's offices, in the Community Care Access Centres in long-term care … I think that we could have done better in that regard, but we had to balance that with the imperative to get these directives out as quickly as possible.[71]

Another problem with the Science Committee was that early on it became apparent that there was no one at the table from public health.[72] To public health officers in the field this was remarkable: that the scientific direction of an infectious disease outbreak was being handled with no direct involvement or input from public health officials, some of whom had extensive experience in outbreak situations. One observer noted:

> … they didn't have a public health person there to – to be able to provide the information … there was no connection to the Public Health Branch on this … I mean Colin [Dr. D'Cunha] was there, but he was not accessible to any of the Science Committee, the people who are to put the directives together. So we are not represented at all in the early days.

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[71] *SARS Commission Public Hearings*, October 1, 2003, p. 89.

[72] Although Dr. D'Cunha was a member of the Science Committee, he was not, given his day-to-day responsibilities in a position to be there continuously.

The lack of a public health presence in the initial stages of the Science Committee was of great concern to those working in the public health field. As one local Medical Officer of Health described it:

> But I remember, [another Medical Officer of Health], telling us and sharing with us how he thought this response was being structured. And we heard this and we said, there's no one from Public Health in this whole response. How is that? How can it be, when we're dealing with a communicable disease? And they said, well they've got no manpower, and we knew that, in the Public Health Branch. They had been no manpower and little expertise in communicable disease at this point. And so we said to ourselves, how can we help? We're going to have to help.

This problem was rectified when representatives of local health units dropped their day-to-day duties to join the Science Committee.

Because there was no plan in place, there were no pre-existing agreements or arrangements between the Ministry of Health and local health units and hospitals to loan staff to work at the provincial response level. Many members were fortunate to have colleagues who provided backup and support so they could leave their current commitments and work at the Science Committee. Others were unable to leave their positions for any length of time, because no back-fill arrangements were in place.

The lack of preparedness and planning also meant that technical groups had to be formed on the fly. One member of the Science Committee described the problems resulting from the lack of planning as follows:

> But to be frank, it [the Science Committee] never got structured the way that I think the whole technical response maybe needed to have been pulled together. And my point here is that if we had had some of that thinking in advance, we might have been able to structure it better. And I think now it's a very good opportunity, this is one of the recommendations, to do that plan. Think about what would be the appropriate sorts of technical groups, and how they have to interact, so that another time we don't the gaps. So, we did end up with these gaps. We ended up with gaps, particularly in surveillance and epidemiology. We ended up with a real disconnect … So in the middle of SARS, they had to create this structure to try and do that too. I mean, that's not the time to be doing all of those things. And those areas of interface are really tricky. I know that from having worked on them in the federal plans. They're very difficult. You're talking with people who are from completely different cultures and backgrounds and used to responding to things differently.

The wide variety of issues that could be expected to arise during an outbreak had not been previously identified and subcommittees comprised of the key experts to resolve or provide guidance on the specific issues had not been formed. This meant that the Science Committee not only had to answer the questions but had to identify the issues at the outset, prioritize them, and determine who best could help answer the question. It also meant that the Science Committee quickly became inundated with requests for guidance and information. Dr. Schwartz, the co-chair of the Committee, noted during his public hearing presentation to the Commission, that "the demand for direction was extreme during the SARS outbreaks because people just didn't know what to do."[73]

Because the Science Committee was formed abruptly, there was no protocol for the routing of information requests. The Science Committee did not have clear terms of reference and it was not always clear what were their priorities.[74] Dr. Schwartz told the Commission that it was unclear at times where their tasks were coming from. He said:

> We often felt that we were dealing with multiple issues at the same time, getting the directives out, providing education or trying to get educational programs out to the users of these directives, dealing with support of operations, answering the questions and sometimes dealing with questions that flowed down from the media and that led to occasional competing agendas.[75]

Another member of the Science Committee described the pressures as follows:

> The kinds of questions that were thrown at us, when the volume I likened to taking a shower in Niagara Falls. It was colossal and we had to set rules as to how many people were allowed to interrupt us.

The Commission also heard from members of the Science Committee that the dual membership and supervision by Dr. Young and Dr. D'Cunha made it unclear who was in charge and to whom they reported.

Despite all the problems noted above, it is clear that the Science Committee played a vital role in the outbreak and could continue to play a role in future disasters. As Dr. Schwartz stated during his presentation to the SARS Commission "I think the greatest strength was the fact that the Ontario SARS Scientific Advisory Committee even existed." As another member stated:

> Despite those challenges, I think the concept of an advisory committee like that, that was robust and was hard working was essential to the success of the, and it's something that should be built into how you approach I think, certainly a biological event; whether that is, god-forbid, smallpox or SARS or whatever we contemplate, there's no question that it worked.

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[73] *SARS Public Hearings*, October 1, 2003, p. 86.

[74] *SARS Public Hearings*, October 1, 2003, p. 96.

[75] *SARS Public Hearings*, October 1, 2003, p. 96.

The fact that the Science Committee worked so well, despite the confusion and lack of preparedness that preceded its creation, is a testament to the dedication of its members and those who supported it.

Problem 12: Lack of Laboratory Capacity

Before SARS, concerns had been raised about the capacity of the Ontario Central Public Health Laboratory (the provincial laboratory). Despite these warnings, the laboratory was unprepared to deal with an outbreak of this magnitude.

The issue of laboratory capacity has been addressed thoroughly in the Naylor Report. The Ontario Expert Panel on SARS and Infectious Disease Control, known as the Walker panel, has commissioned an independent review of Ontario's public health laboratory capacity and anticipates being able to provide more detailed direction in its final report.[76] It is therefore unnecessary for this Commission to say very much about the issue at this stage, subject to further observations in the final report including the effect if any of laboratory capacity in Ontario's ability to deal with SARS II.

Part of the Ministry of Health, the Ontario Public Health Laboratory is a network consisting of one provincial laboratory in Toronto, known as the Central Public Health Laboratory, and eleven regional labs. Approximately half of the 500 technical and support staff are employed in the Toronto facility.[77] Their role is described as follows:

> The public health labs provide diagnostic microbiology testing in support of public health programmes, outbreak management and control, and microbiology reference services for the province in areas where front line microbiology diagnostic testing is not available.[78]

One observer described their importance to the smooth function of the Ontario public health system as follows:

> But with a public health laboratory, while they do deal with individual patients, doesn't have that patient as their number one priority despite the fact that, you know, the patient is very important. Their number one priority is understanding how this one patient with that particular disease, whatever it may be, may impact on the greater public. And so a public health laboratory has as its main focus not the one patient but how that one patient may impact on the greater public.

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[76] Ontario Expert Panel on SARS and Infectious Disease Control, *For the Public's Health*, (Ministry of Health and Long-Term Care: December 2003), p. 66. (Subsequent footnotes will refer to this report as the Walker Interim Report.)

[77] Dr. Margaret Fearon, Medical Microbiologist, Central Public Health Laboratory, Ontario Ministry of Health and Long-Term Care, *SARS: The Ontario Public Health lab's Experience*, presented at the National Forum on Laboratory Reform, (Toronto: March 23-4, 2004), p. 3. (Subsequent references to this paper will refer to the Fearon Presentation.)

[78] The Fearon Presentation, p. 3.

During SARS, the provincial laboratory in Toronto quickly became swamped with specimens. Like other parts of the health care system, it lacked surge capacity – resources to deal with the expanded demands of an outbreak like SARS. One expert described the lab as "under-funded and under resourced" prior to SARS. Consequently, many of the Ontario specimens had to be sent for testing to the National Microbiology Laboratory in Winnipeg and to private and hospital labs in Toronto.

As noted in the Naylor Report:

> With the provincial lab overwhelmed, some hospitals sent specimens directly to the National Microbiology Laboratory [in Winnipeg] bypassing the usual hierarchy of referral. The Hospital for Sick Children, Mount Sinai and Sunnybrook and Women's had strong polymerase chain reaction [PCR] technology – an elegant laboratory testing modality that identifies micro-organisms. They became the *de facto* and unfunded referral centres for Toronto SARS testing.[79]

Concerns about Ontario's public health laboratory resources had been raised prior to SARS. In March 2000, two years before SARS would hit Ontario, the Advisory Council on Communicable Diseases sent a letter to the provincial government, expressing their concern about the inability of the provincial laboratory to handle any high volume of testing. The letter stated:

> I am writing on behalf of the Advisory Committee on Communicable Diseases (ACCD) to express concerns about our provincial laboratory's capacity to adequately deal with the annual influenza outbreaks. The dedication of the public health staff and their willingness to help is beyond question; however, our review of influenza management at recent ACCD meetings suggests that they are badly under-resourced. Inadequate resources, both human and material, have meant rationing of tests, delays in processing specimens, and inability to make new rapid tests available. Such tests, for example for influenza B, will considerably improve our management of respiratory disease outbreaks in hospitals and long-term care facilities.

The earlier inability of the provincial laboratory to keep up with the testing volumes required in the West Nile and Norwalk outbreaks was noted in the Naylor Report:

> … in Ontario, the Central Laboratory was unable to keep up with the testing volumes involved in previous outbreaks of West Nile and Norwalk virus.[80]

In May 2001, concerns were again expressed by the Advisory Committee on Communicable Diseases about the level of preparedness of the provincial laboratory for an outbreak. The Committee wrote to laboratory officials emphasizing the importance of pandemic planning and the need for public health labs to be part of any such plan. Unfortunately, as noted earlier in the report, there was no pandemic plan in place in Ontario in March 2003.

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[79] Naylor Report, p. 33.

[80] Naylor Report, p. 33.

In May 2002, Mr. Justice O'Connor made the following observations in the Walkerton Report:

> I was told by a number of parties in Part 2 of the Inquiry that the expertise within the Laboratory Services Branch as well as the equipment available has been allowed to deteriorate over the last 10 to 15 years and that if this trend continues the branch's valuable role in the evaluation and development of testing protocols will become impaired.[81]

When SARS hit, there were only two medical microbiologists in the Ontario provincial laboratory system. They were responsible for diagnostic microbiology testing and for providing clinical consultation in their respective areas of expertise.[82] They and their staff were stretched to the limit during SARS. Many staff worked long hours and had to be pulled from other areas to assist with the high volume of SARS specimen processing and testing.[83] Their efforts were hampered by lack of capacity. As noted again in the Naylor Report:

> The Central Provincial Public Health Laboratory in Toronto was unable to provide optimal support during the SARS outbreak.[84]

To make it worse, the Ministry of Health and Long-Term Care in the fall of 2001 had laid off its PhD level scientists at the provincial laboratory. These scientists were engaged in the diagnosis and surveillance of new and emerging infections as well as research and development. This latter work has been a sorely neglected aspect of public health. As noted in the Naylor Report:

> Significant involvement in fundamental curiosity-driven research is a public health laboratory function that has withered. Most public health laboratories view basic science research as someone else's job.[85]

Within government, there seemed to be a complete lack of understanding of the importance of the work done by scientists at the provincial laboratory. At the time of the layoffs, a Ministry of Health spokesman was quoted as saying:

> Do we want five people sitting around waiting for work to arrive? It would be highly unlikely that we would find a new organism in Ontario.[86]

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[81] Walkerton Report, Part Two, p. 272.

[82] The Fearon Presentation, p. 3

[83] The Fearon Presentation, p.6

[84] Naylor Report, p. 33

[85] Naylor Report, p. 116.

It is unnecessary, in light of SARS, to bring the irony of this statement to the attention of the reader. Less than two years later, SARS struck Ontario. The provincial laboratory did not have the capacity to deal with SARS, let alone to engage in research and development on its own, and had to turn to hospital labs to work on SARS.[87]

In a province the size of Ontario, this void is startling. One witness compared the Ontario situation to New York State:[88]

> The New York State public health lab, not the federal CDC in the United States, but the New York State public health lab in Albany, New York … at last count, they have 150 PhD level scientists working in that institution. They work on every possible area

One expert in public health speculated that the government had no interest in research because it cost money. He stated "Research costs money, therefore it's a dirty word right now," suggesting that the government had abdicated its responsibilities to private and hospital labs.

Post-SARS, the need for investment in the Ontario public health lab has been acknowledged. The Walker Panel has identified:

> … [an] ongoing and significant concern that the existing core scientific medical and research capacity at the Ontario Public Health laboratory is far short of what is needed for a province with a population of over 12 million.[89]

The panel observed that Ontario's public health lab capacity and resources fell short of British Columbia, a province with a much smaller population.[90]

SARS revealed what experts in the field had been telling the government for years, that there is a critical shortage of trained technicians, medical microbiologists and scientists in Ontario's public health laboratory system. The evidence examined thus far by the Commission supports the recommendations of the Naylor and interim Walker reports that an immediate review of the Ontario public health laboratory system must be undertaken with a view to ensuring that the Ontario Public Health Laboratory has the capacity to deal with both small and large outbreaks in the future.[91]

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[86] *Globe and Mail,* "Cutbacks fed SARS calamity, critics say," May 3, 2003.

[87] *Globe and Mail,* "Cutbacks fed SARS calamity, critics say," May 3, 2003.

[88] New York State had an estimated population in 2001 of about 19.01 million, according to the U.S. Census Bureau. By comparison, Ontario had an estimated population of approximately 12 million.

[89] Walker Interim Report, p. 65.

[90] Walker Interim Report, p. 65.

[91] Naylor Report, p. 122.

In December 2003, the Walker interim report recommended, as a short-term measure, the immediate hiring of two micriobiologists. That has not occurred to date.

Ontario requires more public health laboratory resources to increase current staffing levels, technology and facilities so they can provide an adequate level of service in our system of protection against infectious disease.[92] This will require strategies to recruit and retain highly skilled, scientists in a variety of fields of expertise,[93] the fostering of a culture of excellence and of support for scientific achievement together with the support of collaboration with colleagues locally, nationally and internationally.

There is a further need to link the public health laboratory system with the Public Health Branch and other elements in the health care system. Those who spoke to the Commission about these issues have remarked, without exception, upon the difficulties associated with the physical and functional isolation of the provincial laboratory. It is located in suburban Etobicoke, isolated from the rest of the Ministry of Health and the Public Health Branch and the major teaching hospitals which are located in the city's downtown. Many expressed a sense that the inability of the provincial laboratory to link in to the health care system, including its scientific and academic communities, has hurt their ability to recruit and retain good people.

Lab staff have reported themselves feeling isolated and neglected. For some time the provincial health lab has lacked the presence of regular, on-site, expert management. One expert from the lab remarked:

> In terms of the lab, level, we had a corresponding lack of leadership for the lab in that we do not have, and have not had for the past five or six years, a qualified medical doctor or medical, either medical microbiologist or in the past we've had a pathologist, who is medical director of the lab and that, to me, has been a serious problem in terms of having strong leadership by an individual, who's main concern is health care, patient care and serving public health, rather than having a political or personal agenda, and I think the lack of an individual like that has been very detrimental to this organization … for over five years, we have not had a lab director who is on site.

The labs at both the British Columbia Centre for Disease Control in Vancouver and the CDC in Atlanta, are physically attached to the buildings where the physicians and scientists work, and they have on-site leaders and managers. This connectivity is vital to the collaboration necessary in such an enterprise. One scientist from British Columbia described the benefits of having the lab located in the same facility as the rest of the communicable diseases branch:

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[92] Both the Walker Interim Report, at p. 66, and the Naylor Report at pp. 122-123 recognize the need for government investment in public health labs.

[93] See Chapter 7 of the Naylor Report, wherein he suggests strategies for recruitment.

> Housed within the B.C. Centre for Disease Control we have the provincial laboratory and epidemiology services. We're the only center of its kind in Canada where provincial laboratory and epidemiology are together and I really cannot exaggerate the importance of having epidemiologists and virologists or bacteriologists working side-by-side. Hallway conversations are really critical and a lot of information exchange occurs coincidentally and certainly that happened the night that we were first alerted of the first (SARS) case in B.C.

Not only is the provincial laboratory geographically isolated, but many have remarked that it was functionally isolated during SARS, functioning as a separate silo rather than an integrated part of the Public Health Branch. Prior to SARS, neither the provincial lab, nor the national lab in Winnipeg were linked to a larger information system of data collection and analysis. During SARS, since Ontario did not have an information system capable of handling this kind of outbreak, one had to be developed on the fly and it was not linked to either the national lab or the provincial lab. Without a common data base, tracking of patients, specimens and results was problematic.

One expert noted that the Public Health Branch had trouble getting information from the public health laboratory, even though they were part of the same Ministry. This disconnect caused great concern for many of the experts who came forward to help with the Ontario response. As one of them noted:

> The lab was a huge issue … What we were really worried about, too, was the number of cases that were positive on the lab test that were negative clinically. Were they missing cases and were these going to be the ones that were transmitting the cases even further, cause they were our real worry, cause that that's how we would lose containment, by the asymptomatic cases. … We had trouble getting access to any of the lab information at the Ministry, even though it was the same Ministry.

There is a clear need to link the public health laboratories with the rest of the communicable disease machinery, including epidemiology. These groups should in turn be linked to academic institutions, to provide for a high level of consultation, collaboration and professional development. One expert described the need as follows:

> There should be a new unit. It should be based somewhere if not on University Avenue [in downtown Toronto near the major teaching hospitals and the University of Toronto's medical school] but close to University Ave such that [it] has top lab people and epi disease infection control people linked in with [Public Health] units [and it] has to be linked to teaching hospitals. It has to have labs, public health and universities linked together.

The need for adequate infectious disease information systems, discussed above, includes the need for automated and rapid transmission of data to and from public health laboratories.

An investment in technology is required, to attract and retain good people and to enable high-level research and development and to ensure the rapid testing of a high volume of specimens. One former scientist with the Ministry of Health reported doing their research on borrowed equipment:

> I begged and borrowed from, from anybody in the lab, from other organizations, from other public health labs. Wherever I could, from companies. Get a demo in, do your test and, and return it.

The capacity of a laboratory system to respond to an outbreak of infectious disease must pre-exist any future outbreak because it is impossible to create it during an outbreak. The functions performed by public health laboratories require the work of highly skilled professionals. This work cannot be done by recruiting inexperienced volunteers during an emergency. Nor is it adequate to rely on the hope that private and hospital laboratories will have the extra capacity when needed. Laboratory capacity is much like the rest of public health; its importance is not appreciated, nor the impact of its inadequacies felt, until there is an outbreak and then it is too late.

Despite earlier warnings, the Ontario public health laboratory system proved inadequate during SARS, as demonstrated above and in the Naylor Report. It is essential that the Ontario's public health laboratory system be revitalized with the necessary physical and human resources.

Problem 13: No Provincial Epidemiological Unit

When SARS hit Ontario, the Ministry of Health's Public Health Branch was totally unprepared to deal with an outbreak of this nature. To start with, it had no functioning Epi Unit. Epidemiology is the study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems.[94] An Epi Unit was required to gather, track, confirm, investigate, analyze and report the information about cases and contacts, collected by the local health units. It had a crucial function to perform.

Without epidemiological data, the Science Committee, charged with establishing protocols for managing the outbreak, could not base its decisions on science. The Science Committee needed epidemiological data about the transmission of the disease and whether control measures were effective. It needed answers to a number of vital questions: How was the outbreak progressing? What was the incubation period? How long were people infectious? What were the risks in hospital?

As one observer noted:

> the biggest need they [the Science Committee] had was epidemiology and good information that was current … we needed a proper epi centre

It was also the crucial function of the Epi Unit to provide necessary data about the cases in Ontario to the Chief Medical Officer of Health and other Ministry of Health officials who were to then report to Health Canada, who in turn advised to the WHO. This data also formed the basis for information given to the public and media about the status of the outbreak in Ontario.

Because the Public Health Branch had no functioning epidemiology unit, it was necessary to cobble one together as the outbreak unfolded. This fact, in and of itself, is stunning. As one witness told the Commission:

> I would argue that you could not do effective public health at least from a communicable disease perspective if you do not have a strong epidemiology. You need it to track what is going on and to describe what is happening and to analyze it and use it for policy or intervention and ultimately make a provincial plan; otherwise, you are doing things without … making decisions without data which in this day in age is nonsensical.

Not only was there no functioning epidemiology unit equipped to handle an outbreak, there seemed to be no one at the Public Health Branch with the expertise or willingness to undertake the enormous task of establishing and running the epidemiology unit. In addition, there were not enough qualified staff at the Branch available to assume the epidemiological work that needed to be done.

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[94] Last, John M., ed., *A Dictionary of Epidemiology*, 4th ed., p. 62.

Consequently, staff were recruited from local public health units and beyond to create the Epi Unit. Once a few experts were brought into the Epi Unit, they were then expected to assume the responsibility for recruiting more. This was not easy. There was no surplus of unemployed epidemiologists waiting in the wings to be hired. That meant that the new Epi Unit staff had to recruit help from the field. But local public health units were also grappling with SARS and, given the uncertainty about how far it would spread, they were understandably reluctant to reduce their staff levels. Despite this, the call for help was answered and field staff did come to work at the Epi Unit. Epidemiologists from Health Canada also went to work in the unit. Finally, in the middle part of April, over a month into the outbreak, the Epi Unit was beginning to be properly staffed, largely by volunteers from the field and staff from Health Canada.

One of the first questions that arose when establishing the Epi Unit was where to locate it. Those recruited to the unit felt that it should be located at the offices of the Public Health Branch, rather than at Toronto Public Health's offices located in the downtown core, as the outbreak had spread beyond the borders of Toronto at this point and was no longer a local outbreak. Thus the Epi Unit began working out of the second floor of the Ministry of Health building at 5700 Yonge Street in what had formerly been suburban North York. The Public Health Branch was on the eighth floor.

Basic things such as an office, pens, paper, computers, secure faxes, access cards and support staff had to be put in place before the Epi Unit could begin its important work. As of mid April those working in the unit still weren't being paid and other administrative necessities, such as confidentiality agreements and employment contracts, had not been put in place.

Staffing problems were never permanently resolved. The Epi Unit seemed to be a revolving door with people moving in and out on short-term basis. There was no permanent core of epidemiologists to generate the data needed every day to track the outbreak. When volunteers came, no one knew seemed to know how long they would stay and the constant changing of staff necessitated ongoing training and raised concerns about inconsistency in work product.

There seemed to be constant confusion over who was in charge, to whom they reported, and what was to be done with the data they were collecting. As one witness described it:

> Right off the bat two items came up that were sort of very confusing: one was the overall organizational structure of the unit, trying to determine exactly where we fit in the organizational structure, to whom did we report, how was this basically going to be facilitated, like who, basically who was in charge, where did the reports go.

The Epi Unit was created in the midst of the outbreak and was clearly the result of the hard work and tireless efforts of those seconded to work in the unit. They worked long hours under terrible conditions and incredible stress. Those working in the unit knew the importance of their work and understood the importance of putting aside their frustrations to get the job done.

Many witnesses expressed the concern that the Public Health Branch did not share the same understanding and did not properly support the work of the Epi Unit. When requests were made for staff at the Public Health Branch to assist the Epi Unit, they were told that they were "too busy." Many questioned what could be more important than SARS and did not perceive the Public Health Branch staff on the eighth floor as being "too busy." As one witness noted when describing the attitude of the eighth floor Public Health Branch:

> There was never a sense of urgency. It was very depressing to work around a few people going crazy while others are acting normal. It amazed everyone.

Epidemiology was a crucial part of the outbreak response and in March 2003, there was simply nothing in place to do the work that needed to be done. As noted by the Interim Walker Report:

> Analyzing the surveillance data requires contributions from trained professionals such as epidemiologists, statisticians, and biostatisticians.

These professionals and the systems they needed to do the surveillance systems and protocols necessary to enable them to do their work could not be put in place overnight. As one observer observed:

> it amazes me to this day that the government put so much credence on these numbers each day and if they knew or had any idea of how this system was put together … it was like all this high level stuff and people with meetings and we are spending money and we had nothing at the bottom.

None of the problems noted in this report reflect adversely on those who were brought in to work at the Epi Unit. On the contrary the efforts of these remarkable individuals were crucial to the fight against SARS. Those who spoke to the Commission, while candid about the problems faced by the Epi Unit, were equally candid about the strengths of those who worked there. In particular, Dr. Ian Johnson, a professor at the University of Toronto, and Mr. Bill Mindell, of the York Region Public Health Branch, have been cited for their dedication and perseverance in the face of overwhelmingly difficult working conditions.

Unfortunately, despite the tremendous efforts of many who worked in the Epi Unit, its ability to fulfill its function was hampered by a lack of infrastructure, the absence of an information system and a disorganized and constant demand for information from the public health branch. As one outside observer noted:

> I mean it's impossible to implement. You know you cannot, in the event of an outbreak suddenly hire your whole workforce, implement your computer system and then implement the processes and the legislative frameworks in which to produce a coherent surveillance system.

Despite their valiant contribution to the fight against SARS, those who volunteered at the Epi Unit reported leaving it feeling demoralized and despondent. A disturbing outcome is that some question whether they would ever be willing to go back and volunteer again given the systemic problems that impeded their work.

SARS demonstrated the crucial role of an epidemiological unit in the battle against an outbreak of infectious disease. It was a major failure of Ontario's public health system that no such unit was in place when SARS struck. The development of fully resourced epidemiological capacity is vital to protect Ontario against outbreaks of infectious disease. In the absence of major reform Ontario may not be able in a future outbreak to draw on the extraordinary volunteer resources that helped so much in the spring of 2003.

Problem 14: Inadequate Infectious Disease Information Systems

The fight against SARS was hampered by the lack of an effective reportable disease information system. Neither the provincial Public Health Branch nor the local public health units had any information system capable of handling a disease like SARS. The existing system, known as Reportable Disease Information System, or RDIS, was disease-specific and not flexible enough to handle new diseases. One observer described the progression of the information systems over the past decade and the limitations of RDIS:

> The system prior to 1990 was essentially paper and pen for reportable diseases. So if someone had measles or if someone had tuberculosis, basically they used to keep big books and just keep tabs on it as to how many people were there. Moved over to a new electronic system which is called the Reportable Disease Information System and the abbreviation is RDIS. It's a DOS-based system built around the late-1980's … it's programmed for very specific diseases. So for example, salmonella is probably the simplest that you just want to know the bug, the symptoms, the dates and those things. Something like tuberculosis is much more complex cause you need to know the type of tuberculosis, where it's located, like is it in the lungs, is it in their kidneys, like where is it, you've got the sites, you've got syphilis, you've got various stages so they designed it for every single one of the diseases. Because of the, and the system creates individual databases in each of the health units, so if each health unit was issued this RDIS software, they then entered all the data locally, and then what happens is that the Ministry of Health's computer centrally calls up all of the 37 health units, initiates a program, but then the computer goes through and basically downloads a report to the Ministry, giving all the information on the cases that have been confirmed over the last week. No names ever come across, it's simply an identification number and a confirmation of the diseases, but that system is very specific to each one of the disease and cannot be easily modified … it meant that it was inflexible to take on new diseases so that things like West Nile virus and SARS … And there was a recognition that it has to be updated but presently the system being used by health units is still this one that was designed in the late 1980's and still uses exactly the same software and approaches. And that's why, basically the RDIS system could not be used for SARS.

Dr. Sheela Basrur, Medical Officer of Health for Toronto at the time, explained the problem facing her department when SARS hit:

> The volume of information generated in the SARS outbreak far exceeded previous experience. Since people have not been put into quarantine for the last 50 years in the City of Toronto, there were no information systems in place at the start of the first SARS outbreak to support the management of

> people in quarantine and contact follow-up of these individuals. The 14-year-old provincially mandated information system used to support the surveillance of reportable diseases [RDIS] was not equipped to handle quarantine management and, more importantly, could not be modified by the province to support SARS case management.[95]

When SARS hit, the RDIS system could provide no assistance in tracking and monitoring cases. Moreover no one at the Public Health Branch stepped up to take charge of coordinating and organizing data collection. As SARS unfolded, local health units and the Public Health Branch were left to their own individual devices to establish information systems that could handle the case and contact information. Although the Public Health Branch and the local health units faced the same problem, there seemed to be little collaboration and cooperation between them.

One observer described the situation as follows:

> The [surveillance] system was not well designed, it's something that had been thrown together for the sake of expediency and efficiency … they did not have a good handle on the outbreak, they did not have a good handle on the information system and it was not a good feeling because they were complaining tremendously about other health units, you didn't get a feeling of collegiality, of people working together.

The local health units were responsible for gathering data about cases and contacts and reporting this information to the Public Health Branch so it could track and analyze the outbreak at a provincial level. Given the inadequacies of the existing information system, one might expect that the local units could turn to the Branch for help in establishing a system that could help them keep track cases and changes in their status. However, there appeared to be no one at the Branch with the expertise and the ability to address the data collection problems and to offer viable solutions to the local units.

Because, as noted above, the Ministry of Health had no established epidemiological capacity at the time of SARS and no one in the Branch took charge of this problem, it was necessary to recruit experts from the public health field to cobble together an Epi Unit. Until the Epi Unit was up and running, there was no way to coordinate the work of local public health units into a common reporting structure. This delay turned out to be a critical problem. By the time the Epi Unit was established, individual health units were married to their own individual methods of collecting and reporting data. As a result, they were unable and disinclined to change their systems mid-stream, despite problems created by the diverse manner in which the data was being collected and reported.

The Toronto Public Health unit, which had the majority of the SARS cases, relied on a paper-based system of case tracking. This nightmarish system generated cardboard boxes spilling over with paper, all of which had to be collated and analyzed by hand. Early into the outbreak, the Toronto Public Health unit began putting its local case information on Excel, a popular software that electronically organizes and analyzes data in the form of tabular spreadsheets. Other public health units did the same. A number of problems arose with this ad hoc approach. Firstly, as the outbreak grew in size, the Excel spreadsheets were simply unable to reflect all the cases and the changes in case status. One participant described it as:

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[95] Toronto Public Health, *Toronto Public Health's Response to the Severe Acute Respiratory Syndrome (SARS) Outbreak,* September 9, 2003.

> a small scale system that someone had developed for a small outbreak like when it was at the Scarborough Grace Hospital, and it had now suddenly become the provincial standard that was being used.

One participant described the limitations of the Excel spreadsheet system:

> … the Excel spreadsheets were used initially during the outbreak because there was a small set of cases, it was trying to create a simple line listing. What you do in an outbreak is you normally create a simple line listing and they used the Excel spreadsheets to create that line listing and it was okay when you're dealing with a small number of cases that you can visually look at and keep tabs on basically by simply just looking at the spreadsheet and examining it.

The Excel spreadsheet was not, however, capable of doing what was required in an outbreak of this magnitude. One expert described the problem:

> You want to be able to look at this as something you could basically visually look on the screen, like I don't think you could have more than 20 or 30 cases … You couldn't have more than 20 or 30 cases cause otherwise you're relying on counting. People would sit there and count these …
>
> For a small outbreak you can do that … the excel spreadsheets would have worked, if you'd had about 20 cases maximum. Once you got over 20, it lost its efficiency, it lost its ability because then what you need to do is start running statistical analyses, you need to run tabular analysis of data, you need to run statistics on it, you can no longer just try to keep track of what do the numbers look like and graphing things by hand and updating things by hand, you need to have an automated system to keep track of things, both from a point of accuracy and to monitor trends and to actually reflect what's occurring.

The variables in the Excel spreadsheet were not well defined, making it impossible to run the line lists manually – information crucial to the Science Committee. For example, it would have been preferable if the data inputted into the Excel spreadsheets indicated whether a patient had died with a simple "yes" or "no." Instead, the date of death was often mixed into an area of the spreadsheet where a "yes" or "no" answer would have allowed easy aggregation. This, in turn, prevented the simple tabulation of different types of data. Instead, each day, trained epidemiologists who should have been analyzing data had to manually count lists of such crucial numbers as the total of probable SARS cases. One expert described the problem:

> Say you wanted to know case fatality rate you had to manually pull out the data, to manually do this and subtract that. You should just be able to say date 1 minus date 2, give me the distribution of them … that should be automatically done, not by hand. All the staff got lost on that. They were spending hours and hours, it'd take two epidemiologists full time just to generate these spreadsheets, it was silly.

The need for staff to count the lists manually created further stress, in an already impossible situation. Staff faced the difficult task of counting hundreds of numbers, at times more than once a day, trying to remember the meaning of the various codes used to classify different types of data, all the time fearful of making a mistake. As one observer described it:

> Trying to run a system based on these Excel spreadsheets with people who were there for a week, they would get burned out and then would change and somebody else would come in and of course they'd like to modify the system slightly to suit their tastes. It was trying to build in consistency within that system, there were tremendous time pressures, like Dr. D'Cunha wanted everything by 11 o'clock and would sort of holler and yell if he didn't get it, and the staff were under tremendous pressure. Imagine just being parachuted into the system like this, and it's all manual. You're sitting there manually counting cause you couldn't run the tables [electronically].

Because the information was being sent from each local health unit separately and there was no system for the province to upload the relevant information electronically from the local units, members of the Epi Unit had to go manually through the spreadsheets daily to generate a larger spreadsheet that reflected case activity across all reporting health units. This was a resource-intensive exercise, made difficult by the lack of co-ordination and consistency in the classification and reporting of cases. For example, the Excel spreadsheets sent to the provincial Epi Unit did not clearly show the changes that had occurred in the cases. It would not be apparent if someone had moved from suspect status to probable, without locating the case on the previous day's list and the current day's list and manually comparing the information reported. Similarly, if a person was removed from the case list because another cause for their illness had been discovered, this was not always apparent by simply looking at the spreadsheet. At times, Epi Unit staff would simply notice a case missing and would have to call the local unit to find out what had happened to that person.

Another problem was that the Excel spreadsheet did not contain enough detail to answer all the questions being asked by the various agencies who needed to use the data. One participant described the problem as follows:

> What the federal government was asking for and what the Science Committee was asking for was far more detailed than what was available on this particular form or the Excel spreadsheets. Neither the form nor the spreadsheets went into nearly enough detail. For example they would

> have … fever 'yes/no,' cough 'yes/no' but they wanted to know when was the onset of fever, when was the onset of exposure, what was the incubation period, which fevers came on first They were looking for the clinical spectrum, they wanted to know incubation periods, they wanted to know all these details, which are very meaningful, but you couldn't pull them out of this data, couldn't really assess it because the data wasn't there in sufficient detail.

The ad hoc approach to data collection also led to concerns about inconsistency in classification of cases. For example, there was no standard reporting form for all local health units. There was also no data dictionary – the crucial guide to how a database sorts, groups and catalogues information – to help staff collecting data define and classify cases uniformly. It was never clearly defined who fell into each category. This resulted in inconsistency in classification and measurement:

> The classic was the exposure variable. The exposure variable would show for example there was a health care worker, and there was other health care worker, a health care worker at Scarborough Grace, a health care worker at York Central Hospital, a patient visitor at York Central, a patient visitor Scarborough Grace. These should have shown where was the location, is it Scarborough Grace, is it North York General, or is it Scarborough Grace or was it York Central, and was it a health care worker, or was it not, was it a visitor, we could have broken those out. And they were all jumbled in together … you wound up with these huge long lists of the frequency counts.

It became quickly apparent to those parachuted in to work on the Epi Unit that the information collection system was in dire straights. The Excel spreadsheets simply did not allow for sufficiently rigorous analysis of data related to the outbreak:

> We just couldn't do detailed analysis. That was really the biggest issue, was that you couldn't do detailed analysis of the excel spreadsheets. You couldn't generate graphs of incubation periods, distribution of symptomology, symptoms and profiles, characterizing the disease. You wanted to look at the time between the incubation time to when people were hospitalized, look at all these comparisons of dates to show how efficiently we were doing. They weren't there. We tried our best to grab it out of the spreadsheets but it was jut not efficient … one couldn't do it with any precision.

Other computer systems were available at this time and significant efforts were made to implement a better system. The Federal Government sent two information technicians who were prepared to install a more sophisticated, federally funded outbreak management system called the Integrated Public Health Information System or iPHIS. Extensive efforts went into to developing a standard reporting form, with a data dictionary. The form was developed in cooperation with Health Canada officials, and included important information such whether a patient had given blood – acknowledging that there were other aspects of health, such as the blood supply, at risk. The intention was that these forms would be completed by the local public health units and sent to the Epi Unit at the provincial level for analysis. The goal was that the information be standardized so everyone was measuring the same thing in the same way.

But by this time, over a month into the outbreak and faced with their own huge workload, local public heath units were unwilling or unable to change systems. Moreover, iPHIS was not capable of managing the contact information and this caused local units to question its value. On the other hand, while iPHIS was not capable of handling the contacts, those at the Epi Unit felt that it was better than the current system, which in their view could not handle the data adequately. Moreover, the contact information was not, in any event being regularly reported to the province. Toronto had initially attempted to gather and track the contact information electronically but as the numbers swelled this quickly became impossible to do with the Excel system. Toronto Public Health,[96] despite its best efforts, was forced to resort to a paper based system, which remained in place throughout the outbreak.

Despite all the efforts of the Epi Unit, the iPHIS system was never implemented at the local health unit level and the standard reporting form did not replace the previous reporting forms that each individual local health unit had developed. No system capable of managing the contacts was ever implemented at any level. The information reporting and information systems problems remained a problem throughout the outbreak. One participant described the frustration within the Epi Unit and the difficulties in motivating the staff, who were burned out and upset with the whole system, to keep going:

> You come away feeling absolutely useless that there was a system being used, you couldn't change it, you knew what had to be done, wanted to do it and it just wouldn't go and that people were asking you for reasonable information and it was frustrating because there was, again, a lack of organization.

This outline of the problems with data collection and analysis attributes no fault or blame to anyone who had to work with inadequate information systems. But it does highlight the difficulties that arose by having to use ad hoc systems for information collection and analysis. Both the local units and the provincial Epi Unit were faced with enormous obstacles and each responded in the best way they could, given the tools at their disposal. Many talented and dedicated professionals, both at the local units and at the provincial Epi Unit, did their best to deal with these myriad problems which were not of their doing. What is remarkable is that they persevered in the face of these obstacles. It was a disservice to them and to the public interest in protection against infectious disease that such a mess was allowed to develop in the first place through lack of planning and preparedness and a failure of the Public Health Branch to provide the capacity to collect data and track information on new infectious diseases.

The most disappointing aspect of this problem is that the province had known for many years that its current information systems were inadequate and incapable of handling an outbreak of a new infectious disease. The 2003 report of the Provincial Auditor, noted that the need for a new information system to track reportable diseases was clearly apparent as early as 1997:

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[96] Toronto Public Health even had the Ontario Provincial Police come in and try to set up their Powercase System, a computer system used by Ontario police services in the management of major investigations.

> In our 1997 audit, we recommended that the Public Health Branch obtain additional information on the results of TB contact tracing by boards of health. The Ministry responded that a new information system for tracking reportable diseases was in early development and that additional information on individuals who have come in contact with a person with active TB would be included in the system. At the time of our current audit, such a system had not been put in place, and the Ministry's information on the extent and results of contact tracing was still limited. In addition, ministry and local health unit staff informed us that, except under rare circumstances, they generally cannot force individuals who have come in contact with a person with active TB to be screened. We were informed that the Ministry is considering a federal/provincial/territorial initiative to implement an automated public health information system that would support public health case management. Such a system would also prove useful in cases of other communicable diseases.[97]

This deficiency was again revealed in public health efforts to combat and track the West Nile virus. Despite these early warnings, when SARS hit, Ontario did not have an information system capable of tracking the outbreak.

The lack of adequate information systems was particularly distressing to those who worked on SARS and had been encountered similar problems in West Nile fever surveillance.[98] One scientist experienced the shock of recognition on learning that the effort to contain SARS faced issues problems that had plagued the response to West Nile:

> … it was fascinating to me how so many of these issues were actually identified back in West Nile virus. They were using Excel spreadsheets for transferring the data back and forth in West Nile virus. The fact that West Nile could not be fit into the standard reportable disease information system was not addressed. Now in SARS, we ran into the problem of not having a proper system. So you had to develop one on the fly; I find it a bit surprising.

This problem was underlined in the 2003 Provincial Auditor's Report:

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[97] Provincial Auditor of Ontario, *2003 Annual Report*, (Toronto; December 2, 2003), p. 234.

[98] The West Nile Fever issues was described on pages 240-1 of the 2003 report of the Provincial Auditor: "West Nile virus (WNv) was first confirmed in North America in 1999 and in Ontario in 2001. The first human cases in Ontario occurred in the summer of 2002. WNv is carried by mosquitoes and affects birds and mammals, including people. Studies indicate that most persons bitten by an infected mosquito will have no symptoms; however, approximately 20 per cent of those infected will develop a mild illness (for example, West Nile fever), and 1 per cent develop a serious illness."

> … as of May 2003, there was still no electronic system in place to enable more timely reporting of all cases of WNv to the Public Health Branch, though as an interim step, the Ministry has requested local health units to manually report information on all probable and confirmed human cases of WNv.[99]

The 2003 Provincial Auditor's Report not only noted the lack of preparedness exemplified by West Nile but went further to point out its relevance to diseases like SARS:

> The Ministry did not have adequate procedures to ensure that its expectations for public health were being met in a cost-effective manner. The importance of knowing that local health units are meeting the Ministry's expectations for public health is significantly heightened in light of the emergence of new diseases such as West Nile virus and Severe Acute Respiratory Syndrome (SARS). The Ministry must be able to ensure that local health units respond quickly and properly to such diseases while continuing to minimize the health impact of existing diseases and continuing to provide other mandatory public health programs and services.
>
> Many of the issues and concerns raised in this audit were also identified in our 1997 audit of public health.[100]

A failure to learn from West Nile was not only surprising, it was also symptomatic of a system that seemed at times paralyzed and incapable of taking appropriate measures to protect Ontarians from communicable disease. A system that does not learn from its earlier failings and correct them is a dysfunctional system.

The 2003 Provincial Auditor's report gives a good run-down on history of lack of action on information technology:

> In October 2000, the Ministry, in conjunction with a consulting firm, prepared a Public Health Information and Information Technology Strategic Plan. The Plan presented an overall information technology strategy for public health. However, at the time of our audit it had generally not been implemented. The Plan also identified a large number of systems that have been developed independently among the 37 local health units, primarily in areas where ministry-supported systems were inadequate or non-existent. The Plan noted that the sharing of information between the local health units and the Ministry was limited and that "current legislation and technology infrastructure limits sharing between the health units themselves." The development of independent systems is a concern, as it could hinder the integration of public health information across the province, possibly resulting in the loss of timely, important information needed for public

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[99] Provincial Auditor of Ontario, *2003 Annual Report*, (Toronto; December 2, 2003), p. 242.

[100] Provincial Auditor of Ontario, *2003 Annual Report*, (Toronto; December 2, 2003), p. 218.

> health interventions and for prevention activities. It is also a concern because of the duplication of effort, costs, and time associated with independently developed information systems.
>
> Health surveillance is the ongoing collection, analysis, and interpretation of information that can be used to plan and manage efforts to control diseases. This includes information that assists in controlling outbreaks, making informed resource allocation decisions, and developing or changing public health policies and programs to make them more effective.
>
> Currently, the Public Health Branch supports two surveillance systems: the Reportable Diseases Information System (RDIS)—for communicable diseases and vaccine-associated adverse events (such as illnesses occurring as a result of vaccination)—and the Immunization Records Information System (IRIS) for immunization.
>
> In our 1997 Annual Report we noted that the Ministry indicated that it planned to replace RDIS with an improved system. However, this has not happened, even though the Ministry's October 2000 Strategic Plan noted that RDIS "was developed in the late 1980s with technology that today is extremely outdated, proprietary, and very costly to maintain and support." It further stated that, "one public health role is to analyze health surveillance data to create public health policy and to prioritize and amend public health programs. Much of the information required to provide this analysis is either unavailable or of questionable quality.[101]

In this regard, it is worth noting that the 2003 audit was substantially completed by March 2003 before the SARS outbreak and this audit "did not include work in this area."[102]

Although iPHIS was available prior to SARS, it had not been implemented in Ontario. One federal official explained the delay:

> Over as far back as two years now and after some initial legitimate questioning of iPHIS and looking at it against their requirements, I think that Ontario decided that they would go ahead with the pilot and there was a lot of discontent among the local health units and they had set up a pilot with three local health units all of whom dropped out because they could not cope with the delays and the fact that they felt that they were not receiving the financial assistance that they needed to undertake the pilot and this I am very clear it is because Dr. D'Cunha was not able to get the funding; so he wanted to go ahead with this during at least two fiscal years and the funding was not forth coming from the province to start the process of putting iPHIS in place.

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[101] Provincial Auditor of Ontario, *2003 Annual Report*, (Toronto; December 2, 2003), p. 243.

[102] Provincial Auditor of Ontario, *2003 Annual Report*, (Toronto; December 2, 2003), p. 218.

As noted above, although iPHIS was not equipped to handle the large volume of contact information and tracing that occurred during SARS, experts at the provincial Epi Unit argue had it been implemented across the province it not only would have been better than what they had during SARS but it would have provided uniformity in data collection and allowed for better analysis of the data.

Despite the widespread knowledge that Ontario's information systems were incapable of handling new diseases or outbreaks, and despite some desultory efforts to consider a new system, nothing had been done before SARS hit.

To be fair, Ontario was not alone in its inability to move forward towards a better information system for infectious diseases. As the Naylor Report noted

> … the Auditor General's reports in September 1999 and September 2002 were highly critical of the failure of the F/P/T process to establish the needed infrastructure and concluded that these failings were impairing Canada's ability to detect and respond to such outbreaks.[103]

Although work had been underway for a number of years, progress has been slow. While iPHIS was available, as noted above, it was limited by the lack of an outbreak management module, which would have give health units and the public health branch the ability to manage information around the quarantine process. As one federal expert described the existing system and the work that has been done to enhance iPHIS post-SARS:

> It had a rudimentary outbreak module but you have to understand that there are different requirements and we simply at the time of the development the original outbreak module had no concept of this kind of health issue so we have redone it and we are very confident that the new outbreak module would have been very very affective during the SARS outbreak. The one that was there would have been different. We would have captured the case information and there would have been some ability to use the contact information. What was clearly not there was an ability to manage the information around quarantine persons.

Another gap in public health information technology both provincially and federally, noted above, was the lack of links to public health labs to enable rapid sharing of information and analysis of data. The implementation of iPHIS in the midst of SARS would not have addressed this problem. This gap remains today.

The Standing Senate Committee on Social Affairs, Science and Technology, in November, 2003 made the following observations:

> There is clearly a pressing need to seriously upgrade information technology at all levels of the health protection and promotion infrastructure. The lack

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[103] Naylor Report, p. 97.

> of a modern database accessible to local, provincial and federal health authorities had adverse impacts on the flow of information to the public and to international agencies. The absence of appropriate and shared databases and capacity for interim analyses of data, also interfered with outbreak investigation and management, and constrained epidemiological and clinical research into SARS. Agreements for data sharing between different levels of government, and the necessary information technology, were apparently not in place before the outbreak.[104]

Although the implementation of iPHIS is now being funded in Toronto and York Region the system is just at the pilot stage and has not been rolled-out across the province. The federal efforts to improve information systems, as noted in the Naylor Report, progresses slowly and with some difficulty.[105] The Commission endorses the specific recommendations in the Naylor Report and the interim Walker report to address the deficiencies in the federal and Ontario infectious disease information systems.

Should SARS or some other infectious disease hit Ontario tomorrow, the province still has no information system, accessible by all health units, capable of handling an outbreak. The first unheeded wake-up call was the Provincial Auditor's report in 1997. The second unheeded wake-up call was West Nile. If it takes Ontario as long to respond to SARS as it did to those earlier wake-up calls, the province will be in serious trouble when the next disease strikes.

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[104] Kirby Report, pg. 40.

[105] Naylor Report, p. 98.

Problem 15: Overwhelming and Disorganized Information Demands

The problem of information flow was not restricted to the lack of the necessary information technology systems. Confusion, duplication, and apparent competition prevailed in the work of those in the central apparatus who sought information from local public health units and hospitals. These unfocused demands consumed valuable time of public health and hospital staff, distracted them from urgent tasks at hand, and impaired their ability to get on with the work of fighting the disease.

During the SARS outbreak, information was urgently required by all those fighting the outbreak: the provincial and federal governments, the Provincial Operations Centre, the Public Health Branch, the expert panel known as the Science Committee, health care professional organizations and the media. All clearly needed to be as fully informed as possible to perform their vital role in the outbreak response. Unfortunately, there was no system in place to ensure that their disparate needs could be met without disrupting the efforts to combat SARS.

Local public health units often questioned the need for the degree of detail demanded of them. They resented spending what precious resources they had to track down detailed information intended, in their view, not to combat the outbreak but for political or media briefings. In reality, this information might well have made a difference in the Science Committee's work, and everyone recognizes that informing the public is vital in any public health crisis. But the manner in which information was requested, together with the seemingly endless and unfocused volume of requests, discouraged co-operation. One local health unit described their frustration:

> The Ministry of Health through the Public Health Division or some group put together a SARS epi-centre and started to ask us for line listings of patients. It started out reasonably narrow in terms of cases and then started to get more and more expansive in terms of what they want from it. During this time, their information requests to us become exponential. It started with trying to get information to you them for the daily updates. But I think in the competition for real time information and trying to bring together hospital reports, our reports and whoever else's reports, they wanted to find out the definitive. So, unknown to us, they apparently hired nine case managers to track all of our cases and get more detailed information than we needed at a health unit level. They would phone us and the problem is that they would not just phone us once. We started to get harassed with calls, and I mean harassed in the full depth of that word, we would be called after hours, we would be called by not just one person but five people to gather this information. And it would always be marked urgent. If we did not get back to them within five minutes, they would call again. And we didn't know these people because they'd just been hired. So we want to confirm that they actually are not the media, that they are actually the Ministry of Health and

> why do you need all this information? And eventually, we learned that they were called case managers and that they were supposed to collect all the information on each of the individual cases, all the information that we had had locally and it just made absolutely no sense. It was not modelled after any other report of the disease. There were concerns that the information that we were providing was getting to the media. When the urgent requests would come, it was framed as; Dr. D'Cunha wants this, Dr. D'Cunha needs this and he needs it urgently. Often the information would have already been given already …

Some of the requirements for information came from the Epi Unit, who needed the information to track the outbreak. Pressure for information came from the Public Health Branch, for reasons that were not always clear to those from whom the information was requested. Staff in the Epi Unit routinely received calls from Dr. D'Cunha or his staff, demanding an immediate response. If these demands for information were not answered quickly enough, tensions rose. Sometimes requests went out from the Public Health Branch to a number of different people simultaneously. One witness described a day when an email was sent to five people asking that they all provide the same information, within 20 minutes, or provide reasons for why it wasn't being provided. Another witness described a meeting when one pager went off and then as minutes passed each person's pager around the boardroom sounded. Each person was being paged with the same urgent request for data. These urgent requests filtered out to the local health units and the hospitals, who were also in turn pressured to stop everything they were doing at that moment and provide information immediately.

As one observer noted:

> Imagine six people chasing the same people looking for information, calling the same people all the time, it drove the health units nuts. It drove us back and then they would say that we faxed it to you earlier in the day, but we did not know what fax it went to … because they are coming in by the thousands. They would say we sent you an email, but [there were so many] we couldn't open a third of the emails. It was a circus. It was unbelievable.

When people were unable to obtain data fast enough to suit their needs, they resorted to their own means of gathering information. Not only was the Epi Unit gathering information, but at various points during the outbreak, Ministry staff on the eighth floor where the Public Health Branch was located, the Provincial Operations Centre, the Science Committee were also using different routes to obtain information themselves. This meant that hospitals, local health units and, at times victims, often received multiple calls from different people asking for the same information.

People were stretched to the limit and this constant interference and repetition was frustrating and time-consuming. One public health official tried, to no avail, to negotiate an arrangement whereby the various officials competing for information would not phone more than once every five minutes. Compounding the problem was the fact that the people making the calls were often unknown to the recipient of the request for information. Health officials, health care workers and victims were being asked to provide, over the phone, confidential health information without knowing who they were speaking to or what their authority was to have that information.

Because different groups were seeking information, the lines of reporting became completely confused. The lines of reporting should have gone from hospitals and ambulance, to the local health units, from the local health units to the Ministry and from the Ministry to the Science Committee and Health Canada and other involved parties. This often did not happen, resulting in confusion and frustration.

There was no order in the process and the Public Health Branch would at times call for information directly to hospitals. At other times hospitals would report cases directly to the Public Health Branch in the Ministry of Health, thus bypassing the local health unit's Medical Officer of Health, to whom they should have reported. The result was that information could be reported to the Ministry of Health but not to the local health unit tasked with fighting the outbreak. The local health unit would then receive a call for details from the Ministry of Health about a case they knew nothing about. Even if the local health unit received the information later, this sometimes resulted in conflicting numbers of probable and suspect patients. Adding to the confusion was the fact that there was no single person or agency determining how a case was defined.

The constant and overwhelming request for information led to chaos, confusion, frustration and defeat for those who had to respond to these requests. Local health units report dreading having to contact the Branch for fear it would turn into an inquisition for details about cases and become confrontational. One local Medical Officer of Health said for these reasons, they regretted calling the public health branch and avoided it as much as possible.

There is no doubt that those in charge of the SARS response, particularly Dr. D'Cunha, were under their own terrible pressures for timely information in an environment where there were little certainties and a rapidly shifting landscape. As one witness stated:

> I believe the demands were overwhelming, I believe that he was under undue pressure. Then that put other people under pressure … I think it's really easy to judge but if I knew I was going to that table and that I would be expected to have that information, maybe I would have been calling 20 people at once, too, I just think it's really hard to judge when there were such pressures.

SARS caught Ontario with no organized system for the transmission of case information to those who needed it to fight the outbreak. There was no order or logic in the frenzied, disorganized, overlapping, repetitious, multiple demands for information from hospitals and local public health units. Requests would go out simultaneously to many people for the same piece of information. The work of front line responders in hospitals and health units was seriously impaired by this constant and unnecessary harassment.

Problem 16: Inadequate Data

The data produced by the jerry-built system through the frenzy of information demands, described above, often proved inadequate. Accurate data of high quality was vital to the experts on the Science Committee who had to provide evidence- and science-based direction for the management of SARS. Because so much about the disease was unknown, case-specific information was vital and sound decisions could not be made without adequate data of the necessary quality. The minutes of the April 6, 2003, meeting of the Science Committee note:

> … difficult to make a prediction because of data quality.

In the early days of SARS, the Science Committee lacked even the most basic data about the outbreak. One member described what they didn't get in the initial stages:

> Very simple things that we take for granted now, numbers of new cases, where they're occurring, what was happening. We and the media were hearing stories about cases popping up here, there and everywhere.

Another member stated that they were "operating in a complete vacuum." Others told the Commission that they would get their data each morning by reading the Toronto Star. Another discussed the challenge faced by the Epi Unit:

> The Epi Unit itself has no data, everything it worked with, it needed to get from the health units and what the holdups were there I think were just sheer capacity issues and not having a good infrastructure. But again it shouldn't have been that insurmountable because they're only talking about the cases, not all the contacts.

On April 16, 2003, the Science Committee sent a letter to Dr. Young, outlining their frustration over the lack of data. The letter, which will be discussed below in greater detail, begins:

> I am writing concerning my grave concerns about the ability of the Science Committee to function and provide much needed advice to yourself and Dr. D'Cunha as well as the medical community. This is related to the lack of timely information available to us.

Following this letter, the intervention of Dr. Young and the Deputy Minister of Health, Mr. Phil Hassen, resulted in some improvements in the data flow. At this point, additional outside administrative and epidemiological help was brought to the Epi Unit to improve the flow of information to the Science Committee.

Notwithstanding this support, the Science Committee never reached the stage where it received timely data about contacts of those with SARS. Consequently, it was difficult to judge the effectiveness of control measures such as quarantine. One expert suggested that more limited quarantine measures might have been recommended had data been available during the first stage of the outbreak to demonstrate that a number of people had been exposed to SARS without getting sick:

> The difficulty is I knew we had some people, but I didn't know whether it was 100 we had or whether it was 1500. If it was 100 I probably would have done the same thing again, given the pressures. If it was 1500 then I would have been willing to stand my ground and say it's ok we don't need to take this hit on service, we don't need to quarantine all these people. But I couldn't do that because we didn't have the data.

Another expert spoke to the Commission about the lack of data on contacts:

> That was a major problem because what you're wanting there is to assess how effective was the quarantine and did we really have to quarantine all the number of people we did and were we missing the key cases? You likely had some contacts that were likely to be infected and therefore they could be transmitting that infection and their the ones you really want to go after, because you want to stop the spread of the outbreak. You're balancing setting your net really fine to catch everybody so you don't let any of those people slip through, versus catching a whole lot of other people that are not infected and you get all your staff distracted in that they are busy following so many people and if say they're following up 100 people and only ten of them are actual true contacts that are infected, they're wasting their effort on 90 per cent. But if you set your net really coarse you might only get nine of those ten people that are actually the true cases and is that one person that gets by you is that going to start a whole other cluster? And that was sort of the balancing point that people were trying to work with and the extreme was people were so afraid of missing one case they kept going more stringent and putting so many people in quarantine. We didn't have the evidence because we didn't have the studies to show who was getting infected, who was not, and that's where the whole database on the contacts fell down … We had no data on this.

The lack of adequate data did not go unnoticed by outside observers. One expert from another province who was monitoring the Ontario situation said:

> Because one of the big problems was not even, you know, there wasn't even an epidemic curve available until some time in, around Easter or after Easter. So, it was difficult to see what was happening with the outbreak, and everybody, you know, the WHO and every jurisdiction in the country, was getting their information about Ontario from the media. There was no other reliable source of that information.

Health Canada was forever asking for better information sets. Federal officials report that they did not feel that they were getting adequate data out of Ontario. As one federal official stated:

> We had a lot of challenges, getting the information. We disseminated what we had … and it was very, very limited information. And we even would rely on media, the Ontario media briefings at 3:00, to actually find out what the current case count was on any given day …
>
> I mean we knew that we needed to be able to produce a lot more timely information to disseminate. And it was a national embarrassment on teleconferences when we couldn't share the information. And because the officials in Ontario were so busy trying to respond to the problem, they were never, or rarely, on a national teleconference. And when somebody was on a national teleconference, they were not the people that knew what was going on, if anybody was.

The inadequate data also affected the federal effort to persuade the international community that Ontario had the disease under control. One witness involved in the provincial effort described how the lack of data sharing impeded efforts to convince the WHO to lift its travel advisory:

> If I had to say whether we did bring it on ourselves to a degree I would say yes in the sense that we were not as clear and as open with our own information, the lack of information going up to Health Canada. I've no idea how [the federal liaison person with WHO] was able to give these reports to the WHO on the progress of what was happening. She'd simply have to basically parrot whatever is being said at the Science Committee or is being said by the province. I'm sure that if they started to question, to ask a whole lot of detailed questions, I'm sure she'd be in a very tough situation because it's not as if she had her own people analyzing the data or doing anything. And certainly when she came down she was really frustrated with a lot of the aspects of this.

Another member of the Science Committee also described how the impact of Ontario's inability to provide adequate data on a timely basis to Ottawa affected the ability of federal authorities to communicate with the WHO:

> And so that gave the appearance of incompetence on our part but also gave the appearance of maybe hiding data, with the WHO wondering what was really going on. And Health Canada certainly was distressed by not knowing what was coming out of Ontario. We must never be in that position again.

As noted elsewhere in this report, provincial officials maintain that they gave the federal government what they had and that they did everything they could to share information.

The Epi Unit and the local health units were often unable to provide adequate and timely data. While there is disagreement among those involved as to the amount of data being provided, what is clear is that the experts and officials who needed the data did not get what they needed when they needed it. The information systems and support structures were simply not in place. In the absence of this necessary machinery, not even hard work and the great expertise of those came forward to staff the Epi Unit and the Science Committee could overcome these obstacles.

Problem 17: Duplication of Central Data Systems

Because there was no standard information system for the Public Health Branch and all the local public health units, each individual health unit developed their own data collection system during SARS.[106] The lack of a single, effective, accesssible information system, combined with a constant, intense demand for information from a number of different people and groups, resulted in chaos. As one witness observed,

> … because the [information] needs were not being met, everybody else wanted to jump in and find a system.

The absence of a central database accessible by everyone involved in directing the response to SARS, meant that no one really knew who was gathering what information about whom. And there was no simple way for this data to be shared. As one witness described the problem:

> Toronto would have no idea what would happen in York Region because York Region is a separate Public Health Unit … there were no connections so that to a witness it was almost like a giant curtain going right along Steeles Avenue: that they [Toronto Public Health] saw everything to Steeles Avenue and then nothing, and the same thing happened in York Region. York Region saw what was going on in York Region, but again there was a big curtain going right along Steeles Avenue, and they didn't know what was happening in the City of Toronto.

When it came to data gathering, there was no clear agreement on who would do what. While it was expected that local health units would collect data on cases in their areas, many cases crossed boundaries because many people lived and worked in different public health jurisdictions. For example, a health care worker who worked at North York General, within the jurisdiction of Toronto Public Health, might live in Richmond Hill, which fell under the York Region Health Unit. Because many ill health care workers were treated in their own workplace institution, they were hospitalized in a different jurisdiction than from where they lived. When this occurred, the patient's data was frequently collected by both local public health units and forwarded to the Epi Unit, the province's ad hoc group of epidemiologists. But each unit's data was not always the same. For example, the Epi Unit staff report on one occasion receiving a report from one public health unit that a particular case was fine, while a neighbouring public health unit said the same person had been intubated.[107]

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[106] This problem was also identified in the interim report of the Ontario Expert Panel on SARS and Infectious Disease Control: "Without an electronic surveillance and data entry tool, Ontario a province with considerable resources, has to rely on paper-based systems and/or a number of locally crafted 'systems.' In certain cases, these systems lacked consistency and made the final compilation of data extremely challenging." The Walker Interim Report, p. 161.

[107] Intubation, a medical procedure sometimes used to assist the breathing of SARS patients, involves the insertion of a tube into the trachea to assist ventilation.

It took time and effort to check these discrepancies, investigate the status of the patient and find out which report was correct. This, in turn, increased the burden of information demands on the hospital and created further work for the Epi Unit.

This lack of coordination also added further stress to those dealing with sick family members and with the isolation and fear of quarantine. One family with many members sick with SARS, hospitalized in both Toronto and York Region, reported receiving calls from Toronto Public Health, York Region Public Health and "from various people from Toronto." The witness described having to repeat the entire family history and contact history each time someone different called.

Prior to SARS, in 2003 the Provincial Auditor's Report noted the inability of local health units to share information:

> The only information a local health unit can access on a timely basis is information pertaining to its own jurisdiction. This may limit a health unit's ability to manage fast-spreading outbreaks that may have occurred in other jurisdictions in Ontario. In addition, because local health units generally send communicable diseases data to the Ministry only on a weekly basis, cross-jurisdiction information may not be readily available at the Ministry on a timely basis. Also, if local health units are behind in entering data into the systems, the information at the Ministry may be incomplete or inaccurate.[108]

Duplicate data systems also sprung up at the Ministry of Health. For example, one group in the Ministry ran a system intended to track the situation in hospitals. This group collected data separate from the Epi Unit, but the numbers reported by this Ministry group often differed widely from the numbers reported by the Epi Unit.

One observer described the confusion as follows:

> There was another system going on … that was set up to be a measure on the hospital system so they knew what they had to shut down but the people used it as verification for public health. They would be reporting 60 cases and we would be reporting 30 cases and that was an enormous amount of misunderstanding for people.

Like many problems identified in this report, this one was systemic. It is natural to expect that individual local public health units, who didn't start out with the option of a single data-gathering system to use, would turn to their own makeshift ones. Similarly it was not surprising that the Ministry of Health, when it could not obtain timely access to urgently needed and accurate data from the Epi Unit, would devise its own data collection system.

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[108] Provincial Auditor of Ontario, *2003 Annual Report*, (Toronto; December 2, 2003), p. 243.

This proliferation of data systems, and the confusion and burdens it created, was an inevitable consequence of Ontario's preparedness for a major outbreak of infectious diseases.

Failure to prioritize public health emergency preparedness, and to devise one central system for the collection and sharing of infectious disease data was a major problem during SARS. Although work has been done since SARS to improve the situation, there is no such system now in place to protect us from a future outbreak. Unless this problem is addressed, duplicate systems will spring up again as people scramble to devise their own information systems in the absence of systems put in place before the next outbreak hits.

Problem 18: Blockages of Vital Information

For the reasons discussed above, the Epi Unit was not able to get the necessary information to the Science Committee. What is striking is that even though the Epi Unit knew they were not able to provide optimal data to the Science Committee, the two groups still had different views of the extent of information actually provided. Members of the Science Committee reported that they did not receive even the most basic data at times. However, an Epi Unit worker said that the numbers were produced every day and given to the Science Committee:

> We gave them the epidemiology that they needed. I have seen things in the press that they did not get it and I do not know what they are saying because as much as we had, the Science Committee got. They got everything that we had and I think the reality is that they did not understand that we did not have that much

What this shows is the lack of necessary communication between two key parts of the outbreak response. Had the lines of communication been open and direct, their respective positions would have been recognized during the outbreak, explained, and resolved. Without any planning for a widespread outbreak of infectious disease, the necessary machinery simply was not there to ensure a timely and direct flow of information and feedback between those who gathered and analyzed the data and those who applied it to fight the outbreak.

From the beginning, the lines of communication and reporting for the Epi Unit were unclear. Those working at the Science Committee felt that the Epi Unit should report directly to them. Yet a direct reporting relationship between the two groups was never established, despite the desire on the part of experts in both groups to work together. Dr. D'Cunha reportedly took the position early on that data from the Epi Unit had to come to him for his review before it went to the Science Committee. In the April 16, 2003 letter to Dr. Young noted above, Dr. Schwartz, co-chair of the Science Committee, identified the problem and emphasized the need for a immediate solution:

> Although our face to face meetings (with the Epi Unit) have been seemingly productive, and our relationships with Drs. Mindell and Johnson have been excellent, there has been little to make the Science Committee confident that we are receiving timely data. Dr. D'Cunha had repeatedly stated that the data may be delayed because he is responsible for it and must clear it, and wants us to understand that the data are rudimentary and nor necessarily entirely accurate. The committee accepts this but some data is better than no data. In particular at this critical point, the committee is left with nothing to deliberate and give its advice on SARS Community Spread. This leaves the operational people, including institutions, and public health, frontline physicians and other health care providers in a void. I must stress that Dick and I fully respect Dr. D'Cunha's authority and his wishes to see the data before it goes out. However, the lack of consistent flow of data and, on at least two occasions on the last four days, clear gaps in our communication

> with the epidemiology group, Dr. Zoutman and I feel that the Science Committee is not in a position to offer sound advice. I do not know at this time how this will affect the Committee's function, but do know at present time there appears to be no rationale for its continued existence

Dr. D'Cunha in his judgment felt a responsibility to review the Epi Unit data personally before it was released to the Science Committee and, as noted above, he recalled no significant delays in passing the information forward. However, it is difficult in hindsight to find any objective basis for his insistence that the Epi Unit could not communicate directly with the Science Committee and that the communications had to go through Dr. D'Cunha. Had a rational system been planned in advance, these two groups in the outbreak response would have had a direct reporting relationship and direct communication with each other. It is difficult in hindsight to see any added value by insisting that the information be passed through Dr. D'Cunha as a middleman.

Any delay, no matter how short, impacted the work of the Science Committee. As one member of the Science Committee described it:

> It's my perception that Colin [Dr. D'Cunha] would probably say, well the data probably wasn't ready and I needed to see it and make sure it was okay. Our concept, our view of it was, and I think you have to put yourself in the place we were in, in April, where every day there were new things coming out that we were concerned about and new cases in different places that we couldn't piece together, is that we needed the best data that we could get and even a four hour delay, let alone a twenty-four hour delay we felt was putting us behind the eight ball. It sounds trite to say it now because four hours, what's the big deal? But in the position we were in at the time, we literally felt it was kind of life and death thing because people, we didn't know to what extent it was going to get into the community, we, our colleagues were getting sick and we were pretty anxious.

Witnesses report occasions where Dr. D'Cunha refused to permit the Epi Unit to present data to the Science Committee, notwithstanding their view that there had been sufficient time for him to review the data first. This was also documented the April 16th letter from the Science Committee to Dr. Young:

> On Sunday April 13th, in response to a request from the science group, Dr. Mindell arrived for our 10:00 am meeting with preliminary but essential data including epidemiological curves and spread diagrams for Scarborough Grace and York Central Hospitals, as well as figures on the GTA and the province. He, however, informed me that although he had intended to present the data, he had been directed by Dr. D'Cunha not to do so. He said he would straighten that out in a couple of hours. This never occurred.
>
> Indeed since Friday April 11th, to my knowledge, the Science Committee has not received any data directly from the epidemiology group …

> On Tuesday April 15th, Dr. David Williams attended our 0730 meeting. Dr. Zoutman and I saw this as an improvement and eagerly awaited the epidemiological data. I had finally distributed Satuday's data given to me on Sunday, on Monday April 14th in the afternoon. The April 15th data was given to Dick and myself by Dr. D'Cunha at the 500 pm meeting, however, this was not officially sent to us by the epidemiology group.
>
> Yesterday evening, I received a call from Dr. Mindell advising me that Dr. Johnson would be attending our 0730 meeting today to present important data with respect to the BLD outbreak. As this is a crucial juncture in our management of the SARS outbreak, I told him I would advise Dr. Zoutman of this. However, at 1130 pm, I received another call from Dr. Mindell, advising me that Dr. Johnson would not be attending the meeting. I asked when we would receive the data and Dr. Mindell stated that he was not certain.

Another impact of this process that required Dr. D'Cunha to see the data before the Science Committee saw it, and at times of refusing to allow direct reporting between the epidemiologists and the Science Committee, is that it left many with the belief that data was being deliberately kept from them. Some thought that control of the data enhanced Dr. D'Cunha's ability to demonstrate to those above him that he had the information first and to show those below him that he was in charge. One member of the Science Committee described the situation as follows:

> I think it was, in part the data was not always there, but what was there was hidden, at least to the Science Committee, it wasn't forthcoming even though we knew the data was there. And there was this idea that he who holds the data is powerful with the Ministry senior people, and so it was used to, you know, it was presented to them at the last minute but never to the Science Committee to deliberate on and to contemplate. So there was, you know, "I know something you don't know" kind of mentality.

Again, we are dealing here with impressions and perceptions, not with contemporarily recorded data. Having regard to Dr. D'Cunha's recollection that he always shared and never withheld data, it is not possible to make a finding as to whether these impressions and perceptions were accurate. But in a time of crisis, perception is as important as fact. The lack of any public health plan for a major infectious outbreak, and the consequent lack of the necessary machinery, created an environment in which information problems and perceptions were inevitable. It is clear that the Epi Unit had good relationships with both the Science Committee and Health Canada and the groups wanted to communicate directly with each other but were prevented from doing so.

This was not the only example in SARS of cases where data seemed to be blocked. At least in the early days of SARS it would appear that there were significant problems with data flow between Toronto Public Health and the province. Dr. D'Cunha reported to the Naylor Committee that the province did not receive data from Toronto Public Health for the first three weeks of the outbreak.[109] Those working at Toronto Public Health, however, report that the data was being collected but was not getting through to the province or to the federal government. One expert who worked with the data was asked if they were aware that the data was not getting through to the province and the Science Committee and the federal government:

> Yes I was definitely was aware that it was not there because my colleagues from Health Canada were saying well no one from Ontario was able to come onto the call or the people from Ontario did not have any information to add. I know that you guys are working 18 hours a day, what is going on?

One expert described the problem as follows:

> Their [Toronto Public Health] frustration was that they had quite a lot of data; I would say the Ministry had virtually no data; I was quite taken aback when I arrived by the lack of information and the lack of a system at the Ministry. Whereas Toronto Public Health had a lot of information, granted, it was only on the Toronto cases but they had done their epidemiologic curves they had their analysis, they had it mapped out; their problem was that they felt no one on the SARS Science Committee were listening to them and my impression is there was no transfer of information from Toronto Public Health to the SARS Science Committee. Now, we get into then issues of the transfer of information between Toronto Public Health and Dr. D'Cunha and the SARS Science Committee and Dr. D'Cunha, which there should have been from the Science Committee to Dr. D'Cunha cause he was on the committee ... My impression was you had two silos that weren't talking to each other ... there was some miscommunication within Toronto in the sense that there was not the information coming from the federal field epis up through the system to get to the SARS Science Committee via Toronto Public Health. But certainly my understanding was all the spreadsheets and stuff that had been developed at Toronto were being sent up to the Ministry ... I think it's a combination of the Ministry wasn't asking for it and I think they may not have appreciated what Toronto, what the federal field epis had in terms of the information to give them.

As discussed above and below, the province and the federal government have also disagreed over whether there were problems with the flow of information. This disagreement was noted in the Naylor Report:

> High-level public health officials in Ontario and Health Canada have since given the Committee sharply divergent views on how well information flowed with respect to both its timeliness and adequacy.

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[109] Naylor Report, p. 29

What is striking from all this is that the various groups appear honestly to believe that they communicated the information to each other. Yet clearly there were significant gaps in the transfer of information between Toronto Public Health and the province, between the provincial Epi Unit and the Science Committee, and between Ontario and the Federal government. It is impossible to determine the precise source of the data blockages.

It does not matter whose perception, in the fog of battle against the disease, was correct. The bottom line is that the lack of clarity around the flow of communication and the reporting structure, the absence of a pre-existing epidemiological unit coordinated with the local health units and the absence of clear public health leadership above the Epi Unit provided an environment in which the crucial elements of the fight against SARS were disconnected from each other. Despite the best efforts of individuals attached to all of the groups involved, they simply could not connect effectively.

Problem 19: Legal Confusion

The Naylor Report reviews federal legislation in detail and outlines the areas of weakness requiring reform. The report also measures public health legislation of British Columbia, Ontario and Quebec against the United States Centre for Disease Control's *Model State Emergency Health Powers Act*[110] and makes recommendations for improvement of provincial legislation, specifically in the area of disease reporting and information sharing. The Commission endorses the recommendations made in the Naylor Report.

Although the Commission cannot at this interim stage make specific recommendations for legislative reform in Ontario, a few things should be said about the general need for work in this area. Areas of concern include the following:

- Who legally was in charge of the outbreak?
- Who had the ultimate responsibility for the classification of a case: the local jurisdiction or the province?
- What was the legal authority for issuing directives to hospitals?
- What were the consequences of not following those directives?
- What specific information had to be transmitted, by whom, when and to whom?
- To what extent could public officials and private experts share data and for what purpose?
- Who was obliged to notify relatives that a family member was classified as a suspect or probable case?
- Did privacy rights prevent the sharing of information necessary to fight the outbreak?

The need for legislative reform to ensure clarity of rules of conduct in public health was emphasized in the Naylor Report:

> In Chapter 4 we outlined the basic components of the public health infrastructure, indicating that an appropriate legislative and regulatory framework was essential to giving Canada a stronger capacity for coordinating and managing a response to outbreaks such as SARS. What exist now are separate systems within each of the provinces and territories, as well as a federal system that operates primarily at Canada's international

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[110] Naylor Report, p. 174. Based on a study by Prof. Sujit Choudhry of the University of Toronto Faculty of Law.

> borders. These systems are connected by a limited number of intergovernmental agreements, rather than through a systemic set of intergovernmental agreements oriented around an agreed strategic plan or through formal legal instruments that enable the systems to operate collectively and detect and address common challenges.
>
> In legal terms, we are speaking of the need for rules of conduct (public health rules) that could guide the behaviour of all actors in the public health system – health care providers (e.g. physicians, nurses), health care institutions (e.g. hospitals, laboratories), public health officials from all levels of government (federal, provincial and local), and private individuals potentially subject to quarantine and isolation orders. With respect to surveillance, examples include rules governing the following: case identification (e.g., uniform criteria for diagnosis and laboratory testing), data sharing (e.g., timelines and procedures for reporting new cases and norms governing the protection of privacy), and information dissemination (e.g., responsibility for communicating to national and international audiences and the content of such communication.)[111]

One of the greatest issues in SARS was the obstacle to data sharing, as noted in the Naylor Report:

> Several interviewees reported that data handling protocols were variously unclear or non-existent. Developing them during the SARS outbreak proved to be time-consuming and frustrating. One interviewee described the situation as "a turf war" on multiple levels.[112]

Some observers have attributed the reluctance to share data to concerns for patient confidentiality. This rationale was similarly noted in the Naylor Report:

> Dr. D'Cunha stated that protection of patient confidentiality constrained his ability to release data to Health Canada. Senior public health physicians in the Greater Toronto Area took the same view of their obligations to share data with the Ontario Public Health Branch. Health Canada informants in turn argued that they never wanted personal identifiers, simply more detail to meet WHO reporting requirements.

The problem was not limited to data sharing between government officials. Some local health units reported problems getting information from some hospitals, pointing to the need for clear rules around the reporting duties of heal care providers. As one public health official suggested:

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[111] Naylor Report, pp. 163-4.

[112] Naylor Report, p. 29.

> The big problem I think we had in SARS and subsequently is having the hospitals sharing information with the [public health unit] with respect to communicable diseases. Either the hospital reacts by saying we will do the investigation and follow-up ourselves and do not need public health or secondly they will advise us of the issue of patient confidentiality and therefore because they are not required to provide us with the information, they would not be able to do so. So I think that would really help.

While protection of patient confidentiality is a key consideration in any data sharing agreement or legislation, it should not in the future impede the vital communication of data to the extent it did during SARS. Notwithstanding the strong privacy concern demonstrated by many of those who fought the outbreak, a number of families affected by SARS reported that they felt their privacy had nonetheless been violated because personally identifying information somehow made it into the media. It is ironic that although privacy concerns restricted the flow of vital information between agencies fighting the outbreak, they were not always effective to keep personal information from the media.

Whatever the precise path of legislative reform, privacy, while vital, should not impede the necessary sharing between agencies and governments of information required to protect the public against an outbreak of infectious disease. The University of Toronto Joint Centre for Bioethics, in a report to the Naylor Committee, noted that at times an individual's rights must give way to the need to protect the public's health:

> Public Health versus civil liberties: There are times when the interests of protecting public health override some individual rights, such as freedom of movement. In public health, this takes its most extreme form with involuntary commitment to quarantine.
>
> Privacy of information and the public's need to know: While the individual has a right to privacy, the state may temporarily suspend this privacy right in case of serious public health risks, when revealing private medical information would help protect public health.[113]

There should be a clear distinction between the sharing of data between health care professionals (between public health officials and between public health and private health care workers, institutions and organizations and between private health care institutions/organizations), between public health and researchers seeking to engage in scientific studies, and the release of private medical information into the public domain.

To take one example only of the specific issues that must be addressed, one public health official expresses concern that the current proposals for legal reform are not strong enough:

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[113] Naylor Report, p. 178. Taken from Singer P., Benatar, S.R., Bernstein M., Daar A.S., Dickens B.M., MacRae S.K., Upshur R.E.G., Wright L., Shauk R.Z., "Ethics and SARS: Learning Lessons from the Toronto Experience," June 18, 2003, submitted to the National Advisory Committee on SARS and Public Health. See http://www.utoronto.ca/jcb/SARS_workingpaper.asp.

> The *New Information Protection Act 2003* allows the health information custodian to disclose, it says may and not shall about information of an individual to the Chief Medical Officer of Health or Medical Officer of Health and is very broad. It says for the purpose of that act. I understand that … there has been a lot of opposition to that particular section. I think that section is great because it will help public health move quickly and collect information that it needs when faced with a situation such as SARS or another influenza pandemic; I am concerned that section is going to be wiped out in the future reiteration of the Bill.

In addition to the rules for sharing information, clarity is required around the ownership of personal medical data. Those who needed to use the data and to share it in order to find out how the disease was spreading and do research to keep ahead of the outbreak, were hampered by legal questions such as who owned the data: Does the City of Toronto own the data? Does the province own the data? Can they share the data for research?

One of the leaders in the fight against the outbreak described to the Commission a remarkable inability to share information necessary to fight the outbreak:

> And then we got into, well, health units owned their data, how much cooperation should be brought to the public health branch and of course bringing it up, bringing it to the federal level is brought in a whole new set of barriers. But even branch to public health unit and between public health units there seemed to be this incredible mindset of not able to share, that there was some reason they couldn't share data and bring data together.

One public health official, looking beyond SARS, put the problem on a more general basis:

> Yes, public health needs more power in health emergencies, infectious or not. There is a really strong need to have better protected but greater access to information on the part of the local Medical Officer of Health and the provincial Medical Officer of Health. Take the potential problems with avian flu; say there is a complaint of an occupational health or environmental hazard in relation to avian flu; under section 11 of the HPPA [*Health Promotion and Protection Act*] there is a duty on the part of the local Medical Officer of Health to investigate and to get information from the Ministry of Labour and Ministry of the Environment about the local health concern, and to get whatever information is available from the Canadian Food Inspection Agency; it's a public health responsibility to investigate and get the information that might have a bearing on the health of farm workers, but other agencies may say that they aren't legally able to give us the information we need … And this is just one example of privacy restrictions, what additional powers should be invoked in an emergency to ensure that information is shared with those who need it; the whole question of privacy restrictions, where the data is stored, and by whom it can be accessed, needs to be dealt with.

It is regrettable that the lack of legal clarity around the sharing of medical information led to the interjection of legal wrangling into what should have been a seamless emergency response. As one public health official warned:

> There should be clear legislation about what powers kick in for health emergencies. There needs to be a clear and scaleable set of legal powers available to the province. Now that the outbreak is over everyone sits back in their armchair and says we have to thinking about human rights; we don't want to give powers to civil servants, we don't need laws to require the sharing of health information in an outbreak, if an emergency arises we can enact them then. But of course that's like locking the barn door after the horse has gone

The Commission during the course of its investigation will continue to address issues around the need for legislative changes identified in the lessons learned from SARS.

Problem 20: Public Health Links with Hospitals

SARS was largely a hospital spread infection. Although there was some spread in households and doctors offices, and a limited element of community spread, most of the transmission took place in hospitals.

Of the 247 probable cases[114] in Ontario 190, or 77 per cent, were either health care workers, people who sought care at health care facilities or visitors. Health care workers were the predominant group: 108 were probable cases, a full 43 per cent of all probable cases.[115]

Ontario Epidemiological Link by Contact Type[116]

	Phase 1 - Probable	Phase 1 - Suspect	Phase 2 - Probable	Phase 2 - Suspect	Total Probable	Total Suspect	Grand Total
Health Care Worker	62	56	46	5	108	61	169
Patient	16	7	34	1	50	8	58
Visitor	9	11	23	0	32	11	43
Total	**87**	**74**	**103**	**6**	**190**	**80**	**270**

Before the SARS outbreak, in theory at least, public health had an important role to play in preventing hospital infections. Hospital infection control was one of the Mandatory Health Programs and Services Guidelines issued by the Public Health Branch of the Ministry of Health in December 1997. Established under the authority of Section 7 of the *Health Protection and Promotion Act*, the Guidelines oblige local boards of health, and by extension local public health units and Medical Officers of Health, to meet minimum standards for fundamental public health programs, including infection control.

As for hospital infection control, the Guidelines state:

> The Board of Health shall ensure appropriate input to hospital infection control programs in the health unit. This shall include as a minimum:
>
> a. representation of the Medical Officer of Health or designate on each hospital infection control committee;

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[114] The 247 probable cases include the 190 listed in the Ontario Epidemiological Link by Contact Type table, as well as 57 others whose transmission was not linked to a health care setting.

[115] *SARS Commission Public Hearing*, September 29, 2003, pp. 82-87.

[116] *SARS Commission Public Hearing*, September 29, 2003, pp. 82-87.

b. reporting of designated communicable diseases from hospitals, including emergency rooms and outpatient clinics, to the Medical Officer of Health as required under the provisions of the *Health Protection and Promotion Act*;

c. consultation with the hospital infection control committee on the development and revision of infection control policies and procedures and an outbreak contingency plan;

d. providing advice when requested or when needed for the appropriate management of communicable diseases and infection control;

e. providing epidemiological information as needed regarding communicable diseases existing within the community and other institutions; and

f. collaboration or assistance in annual in-service education for hospital staff about communicable diseases.

In many cases during SARS the relationship between the public health unit and the acute care hospitals was exemplary. This was particularly so when a good relationship predated the SARS emergency. For example, more than one jurisdiction outside of Toronto reported that a member of their staff sat on the infection control committees of the hospitals and long-term care facilities in their jurisdiction and reported that those links were invaluable during SARS. In those jurisdictions the public health physicians and the hospital infection control physician(s) knew each other, knew how to reach each other, and had previously worked together. As one witness described it, at the time of SARS they already had "a lot of connectivity with our agencies, personally and professionally." They went on to describe the benefit of this relationship as providing them with "all the building blocks" for their outbreak response.

In other cases, however, the links were not as strong. For example, before SARS Toronto Public Health did not have a large role in hospital infection control. Instead, they focused on long-term care facilities, leaving hospital infection control largely to the individual hospitals. They described their focus as follows:

> Long-term care facilities and nursing homes are regulated. We do have a role and that is where we concentrated our infection control with the limited expertise that we had … we have a fairly good relationship with them. There are 78 long-term care facilities that we look after in the City of Toronto and we have spent a lot of time throughout the facilities developing policy because they do not have infection control support to the same degree as hospitals and when we talk about we were being shaved, they were being shaved as well and we assumed that hospitals were maintaining a certain level of infection control. We put out eggs in the long-term care facilities because we felt that they needed the most support.

Toronto Public Health lacked the necessary resources to ensure a strong public health presence in each hospital in the Greater Toronto Area. According to its 2004 Operating Budget Submission:

> Experience from SARS demonstrated the importance of Toronto Public Health having the capacity to establish enhanced disease surveillance and public health response to hospital-based infectious diseases. Prior to SARS, Toronto Public Health was not meeting provincial minimum mandatory requirements for control of infectious diseases and infection control in institutions.[117]

Because strong links had not been forged, working together was not always easy. People who had never met or worked together and whom had little or no understanding of the operational issues faced by each other, were being asked to collaborate during a very stressful period of time. Toronto Public Health officials described the problem of trying to get information from a local hospital in the absence of strong links to the hospital:

> TPH staff need information from the hospital about a patient in isolation. The hospital refuses to provide CXR or lab results over the phone as they are concerned about patient confidentiality. Because there is only one patient in isolation in this hospital, it is not practical to have a TPH staff person onsite 7 days/week.

In June 2003, to remedy this situation, Toronto City Council approved the creation of a dedicated communicable diseases hospital liaison unit for one year. It requested and received 100-per-cent provincial funding until March 2004 and 50-per-cent funding as an ongoing commitment.[118]

The issue of future funding and the extent of provincial contribution is now under discussion at the City of Toronto, where the Chair of the Toronto Board of Health said:

> Senior (city) staff have said unless the province pays for the whole thing, it should be scrapped. (Public health) staff feel it's pretty well essential to deal with a crisis situation."[119]

Toronto Public Health noted:

> The [Communicable Diseases Liaison Unit] is essential for Toronto Public Health's capacity to prevent and control serious infectious disease outbreaks in the future.[120]

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[117] Toronto Public Health, "2004 Operating Budget Submission," February 9, 2004, p. 10

[118] Toronto Public Health, "2004 Operating Budget Submission," February 9, 2004, p. 10

[119] Toronto Star, "Filion claims cuts will hurt city's health," March 10, 2004

[120] Toronto Public Health, "2004 Operating Budget Submission," February 9, 2004, p. 10

Because the transmission took place largely in hospitals, and because the investigation and control of transmission is a public health responsibility, the linkages between the hospitals and the public health system became crucial.

But the boundary lines between public health responsibility and hospital responsibility were not always clear. There was, and remains, little clarity of the respective accountability, roles and responsibilities of hospitals and public health units in relation to a hospital outbreak. One Medical Officer of Health put it very succinctly:

> Q: Were the roles clear then about the lines of public health authority and accountability when there is an outbreak in a hospital? Is there enough clarity now about the role of the Medical Officer of Health in relation to a hospital during an outbreak?
>
> A: No.

As another local Medical Officer of Health expanded on this lack of clarity:

> When it comes to infection control, communicable disease control had not been the main focus of public health until SARS, which was largely an institutionally based outbreak. The relationship [between public health and hospitals] has been a distant one. In my experience, I have either dealt with quite sophisticated large hospitals which are well resourced for infection control and have people working there who know more than I do, so that is one end of the spectrum, the big teaching hospitals in Toronto, or smaller community based hospitals who occasionally look to public health for some advice but not on the kinds within the four walls of infection control precautions that are needed for basis day to day infection control or the control of an outbreak within the walls of hospitals. Many medical officers of health and their staff do not have that training and they have developed some experience with it over the years but we are better trained and accustomed to deal with outbreaks out in the community than within a health care institution.
>
> I think the discussion ought to be about roles. Infection control has been largely within the four walls of the health care institution. Each would look after their own and it became an issue between institutions when patients were transferred. But there were not a lot of situations in which there was an outbreak that spread through hospitals the way that SARS did, so the involvement of the public health local agency as an overseer of the health of the whole population was not as it was in SARS. I think that public health was pulled in to take on that role in a way that we had not had much experience with in the past. I would get consulted about an outbreak such as Norwalk virus in a hospital so that we would support the hospital and work with them on that but I cannot think of any other situation with a multi-institution outbreak that was not a reflection of what was happening in the community, like a flu in the community and then in the homes and hospitals.

> But SARS was something different and that was one of the difficulties that arose with public health trying to play a different role than it had historically.

This lack of clarity around the role of public health in hospitals has left some local Medical Officers of Health with the sense that they had no real authority in hospitals, yet that they were still held responsible whenever there was a problem:

> It always seems that when there is a problem within an institution, then suddenly it is public health's fault. There was an outbreak of [an infectious disease] in [a hospital] and the hospital essentially told the Medical Officer of Health they would look after it … Then all of a sudden when there was a problem it was the health unit that was said to be the source of the problem when in fact it was the hospital .. Now with SARS, which really was a problem within the hospitals, it was not a community outbreak, it is all of a sudden public health's failure here to do something that resulted in these outbreaks. Even in today's Star, I read the comments that if there is another outbreak of SARS, that the hospitals would be more prepared but the general system is still somehow lacking which I say, again, is a slap at public health that somehow these things going on is the fault of public health.

Even where the roles have seemed clear, the relationships between hospitals and public health have not always been strong. One local Medical Officer of Health described the problem as follows:

> Up until SARS, the role of health units and of public health in terms of infection control has been rather iffy. The guidelines of what we are supposed to do are clear enough. We are supposed to provide advice and the Medical Officer of Health is supposed to sit on the hospital infection control committee. Some have committees and some do not and others may not have a specific one. They are supposed to report communicable diseases to us. Reporting has not traditionally been 100 per cent and there has always been a tension between public health and hospitals in the sense that hospitals do not want public health to be involved in whatever it is that they are doing until there is a big problem where they are looking for some kind of outside assistance to help. That may be too harsh. I guess that would vary across the province to a degree in which public health is intimately involved in infection control with hospitals.

SARS showed that public health does have an important role to play in infection control in hospitals. The role of local health units in hospital infection control needs to be clarified and fully funded. Yet, this remains a problematic area. One infection control specialist believes that more needs to be done to better focus the role of public health in hospital infection control practices:

> So in my view, unless … we get a handle on and have good control over infectious diseases, very little else will go forward, or will not go forward very successfully … I believe that hospital infections account for the fourth

> leading cause of death, still. And I think we need to bring that up to a level where it has the resources to be effective, I mean we have, you know, we have a Cancer Care Ontario, we have a Cardiac Network, we have a lot of these resources we've put into these key diseases as we should, but there is nothing you can put your hands on for infectious diseases. It's gotten buried under the health units where it's not clear what their role is … I believe … hospital infections occur day in, day out and, you know kill 8,000 to 12,000 Canadians every year. [emphasis added]

Wherever the line of accountability is drawn and however it is adjusted for local conditions and the respective infection control expertise of the Medical Officer of Health and the hospital, it is essential that the lines of accountability be clear and that any increase in responsibility to public health come with the resources to meet them.

Whatever strengthening is necessary of the link between public health and hospitals in relation to infection control, it should not create the impression that public health is taking over infection control in hospitals. As one hospital infection control specialist noted:

> I don't particularly want the health unit coming into [our] hospital to tell me how to run an outbreak … because a hospital is a community unto itself and I know this community, I know this hospital, you know, this … clunky old structure like the back of my hand and I think I'm the best person to run an outbreak in my hospital whereas if it's in the community I call [the local Medical Officer of Health] instantly and he and I understand each other completely and he would never even dream, he's on our infection control committee and he would never dream of coming into [our] hospital and telling us how to run an outbreak. The *Health Promotion and Protection Act* as I understand it, isn't really clear as to what the role of a medical officer is inside a hospital. The *Public Hospitals Act*, as I read it, says that it's my responsibility, my Chief Executive Officer's responsibility who then hands it over to me. So my interpretation is if it's an infection issue in my hospital … either it's a community infection that intruded in my hospital or it's a hospital infection that's going on, it's my problem. I suppose the medical officer, if he really thought what I was doing was bad or I was derelict, has some capacity to kick at the walls of this place and is supposed to be on the infection control committee but I would be really worried to see the public health unit running hospital infection control because just as I'm not well suited to running a community outbreak, I don't think they're well suited to running a hospital.

This specialist added that there may be situations in a smaller community if the Medical Officer of Health is the only person in the community, including the hospital, trained in communicable disease control, it might make sense for the Medical Officer of Health to be directly involved in controlling the hospital outbreak.

A local Medical Officer of Health agreed that, while the roles and lines of authority need to be clarified, that does not mean that public health should assume the role of infection control for all hospitals:

> I think that hospitals want to do this, they want to do a good job, if they are given the resources, if they are given the information and if they are given some mechanism by which they can coordinate with other parts of the health care system, I think that they can do a good job.

There is a difference however between taking over infection control in hospitals and having a role to play in ensuring standards are met and in having an authoritative presence in relation to infectious disease outbreaks. Infectious disease outbreaks that occur in hospitals may spread to the community and the potential for community spread will almost always be present. Public health must have a role to play. As one local Medical Officer of Health stated:

> I would be worried about infection control. There has been this tension between hospitals and public health and it has not been clear as to who has the ultimate jurisdiction and responsibilities. I would not like to see a system where now that hospitals are keenly interested in infection control within the hospital sectors and want to develop networks, that the hospitals say we will do that and we do not need public health. Public health has a very important role in terms of making sure that things get done, that things do happen. I think a lot of that goes back to a public health role brought about by credibility and not by legislative authority. I would feel very badly if the outcome of all this is that the hospitals get more money to do infection control and public health is somehow told we do not really need you for this. I think that public health is important and although infection control is not the major thing that will improve the health of people in Ontario, it is still an important thing and it is one of the historical roles for public health and it should have ongoing a role in this.

The important role of public health in hospital based disease was stressed in the external review of the B.C. Centre for Disease Control:[121]

> Establish a presence in nosocomial infections. Currently each hospital has an Infection Control program. However, no organization coordinates and oversees nosocomial infections for the province. The need for coordinated action between public health in the community and in the institutional sector was highlighted by SARS. A Centre of Disease Control can assume this function.

Despite the above, in many cases the Medical Officer of Health has been able to exercise a good deal of positive influence, notwithstanding these weaknesses and the lack of clear statutory authority regarding their role and responsibilities in hospitals. As one local Medical Officer of Health noted:

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[121] Paul Gully MB ChB, Thomas Marrie MD, October 30 2003

> It may not be as bleak as you think. Sure, we get called in on things that we do not have all the answers for and all the experience for. But my experience has been that we carry quite a bit of weight even without that [statutory authority]. If I put my views in writing about what I think a hospital should do … and give it to them and they do not do it, even though I do not have direct authority, I think that they … usually respond … If they do not want six months later to have an inquiry and have the Medical Officer of Health letters saying that you should be doing this and have not done it. I have been involved in lots of situations where that has been sufficient to make something happen that needed to happen even though the authority is not clear. So you do carry a fair amount of weight provided that you have credibility. It is liability that is the driver for decision making; we have an expert opinion telling you to do something and I think most institutions are responsive and particularly public ones and private institutions that feel some responsiveness to the community with shareholders or public image, I think generally are responsive unless they have a good reason why they should not or disagree with something.

This observation suggests that the effectiveness of the Medical Officer of Health in relation to hospital outbreaks under the present system may depend largely on their credibility and the degree of moral authority they exercise in the local hospital community. This is a good reason for putting more resources into local public health to ensure the recruitment and retention of local Medical Officers of Health who will command the necessary credibility. It is also a good reason to clarify the role and authority of the local Medical Officer of Health, subject to the direction of the Chief Medical Officer of Health, in relation to hospital infection control and outbreak management, in order to ensure that the protection of the public is not so entirely dependent on the degree of influence the local Medical Officer of Health has been able to secure based on his or her own personal experience.

More will be said about the relationship between hospitals and public health in the final report. What is clear from SARS is that hospitals can become the epicenters of infectious outbreaks that can move into the community. Much needs to be done to clarify and strengthen the role of public health units in hospital infection control and to strengthen links between hospitals and public health.

Problem 21: Public Health Links with Nurses, Doctors and Others

Public health links with nurses, doctors, other health care workers and their unions and professional organizations were often ineffective during SARS.

This was evident at the outset, when the province realized it had no way to communicate rapidly with physicians throughout the province. On March 14, 2003, when public heath officials realized that there was an infectious disease at Scarborough Hospital at risk to spread to other health care facilities and possibly the community, the Public Health Branch prepared a letter for distribution to all physicians in the province to advise them to be on the alert. But they had no way to distribute the letter[122] quickly and in the end they had to turn to the Ontario Medical Association to help. Through this channel, the letter was distributed via email and fax. The Ontario Medical Association was able to reach about 90 per cent of the province's doctors in a matter of hours.[123]

It was fortunate that the Association was able to help and that the emergency unfolded on a Friday afternoon, when staff were available to assist the Ministry with the distribution. It is important to note, however, that this did not reach all physicians. Additionally, the notification was dependent on a physician receiving the fax or email and immediately reviewing it. It did not guarantee that emergency rooms and other points of first contact for patients throughout Toronto received immediate notification.

The use of the Ontario Medical Association highlighted a disturbing systemic weakness, however. Other equally important front-line responders, such as nurses, ambulance services, paramedics and nurses – and their unions and professional organizations – were not included in this early notification.

As the Ontario Nurses' Association and the Ontario Public Services Employees' Union stated in a joint submission to the Commission, with respect to a subsequent letter:

> Not only does the March 18 letter give detailed information about what was known about SARS at the time, it also gives detailed information on Infection Control measures. The letter advises that Health Care Workers who have direct contact with suspect SARS cases use gloves, gowns, eye protection and N95 masks. Neither union has any knowledge that any of this information was communication to HCWs in any health care facility. Why would information pertaining to the protection of HCWs and infection control practices be sent only to physicians?[124]

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[122] The issue of communication of infectious disease alerts will be dealt with in greater detail in the final report.

[123] *SARS Commission Public Hearings*, September 29, 2003, p. 36.

[124] *SARS Commission Public Hearings*, "OPSEU/ONA Joint Report on Health & Safety Matters Arising from SARS," (Toronto: November 3, 2003), p. 4.

There is only one appropriate answer to this disquieting question: All health care workers should have been immediately notified.

Although this interim report is limited to questions of public health renewal, much more will be said in the final report about the critical need to listen to nurses and other health care workers and to more effectively communicate with them in hospital and other settings. At the public hearings Mr. Bruce Farr, Chief General Manager for Toronto Emergency Medical Services, described the need for closer links with public health:

> We need better control in terms of notification of outbreaks, the earlier the better so that we can communicate to the staff the importance of protecting themselves. We need to work more closely with public health and hospitals in terms of communication of these issues. Paramedics have a significant role in reporting outbreak from the front line.[125]

Outbreaks can strike at any time and they do not respect standard work days or work week schedules. Nor do infectious outbreaks stand still until people have had an opportunity to check their faxes or read their emails.

When the early warnings of an infectious disease became known, there was a need to notify health care workers, particularly nurses, emergency responders and front line physicians (both hospital and family physicians) and immediately. Time was of the essence, as one missed case could spread and infect many others. Yet there was no system in place to do this. There was no way to get vital information quickly, directly to the front lines, seven days a week, 24 hours a day. Such a system is clearly needed as an element of any renewal of public health infrastructure.[126]

Beyond the early notification issues, links with various health care sectors remained a problem throughout SARS.

Family physicians comprised a critical group of front line workers who were largely overlooked in the early days of SARS. Jan Kasperski, Executive Director and CEO of the Ontario College of Family Physicians, described the experience of family physicians as follows:

> One of our family physicians said that family physicians were treated like mushrooms during the SARS crisis. They felt as if they were kept in the dark and fed manure, in terms of information, and they operated under an umbrella of darkness … They needed information and direction to protect themselves and others, yet they suffered from mushroom syndrome throughout those early days. This is in direct contrast with the experience of

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[125] *SARS Commission Public Hearings*, September 29, 2003, p. 163.

[126] A number of witnesses who presented at the SARS Commission's public hearings emphasized the need to directly communicate with front line workers during a crisis or outbreak. See pages 122 and 134 of September 30th public hearing transcripts.

> hospital administrators who state that information was coming at them so fast and furious that they had major problems keeping up with the flow.[127]

The absence of public health link was evident following the Lapsley Clinic outbreak. In April, 2003, a patient who had been exposed to SARS in hospital came in to the clinic for a routine visit. This visit touched off an outbreak amongst clinic staff and patients. Ms. Kasperski, of the Ontario College of Family Physicians, described the lack of support that the clinic had from public health, following the outbreak:

> "Meanwhile, [Dr.] Rex Verschuren struggled to keep the practice open at the Lapsley Clinic knowing the needs and, indeed, the fears of the patients he and his partners (who were ill) were serving. At no time did he receive any calls or visits from those in authority and to this day, he does not know if those who were exposed in his office were contacted. No one from Toronto Public Health or the Provincial Operation Centre offered the Lapsley Clinic advice on how to decontaminate their office. They simply trucked on.[128]

Public health and provincial efforts seemed solely focused on hospitals for much of the time. As Dr. Yoal Abells, a Toronto-based family physician and a member of the Board of the Ontario College of Family Physicians and the Chair of Family Physicians Toronto said at the public hearings:

> But the reality is that there was no one who issued orders to community-based physicians. No one said, this is what you must do and you will do it and you will do it now. Doctors Young and D'Cunha did this for the hospital sector, but the community was left out.[129]

The Lapsley clinic showed that family physicians were clearly at risk, as a SARS case could walk through their door at any time. Many SARS patients did not only go to SARS clinics and hospitals. Many avoided them from fear of SARS and went instead to see their family physician. Ms. Kasperski on behalf of the Ontario College of Family Physicians told the Commission how, in the fog of battle, the risk faced by family physicians and their need for communication and assistance were overlooked:

> In times of war, you hit the hot spots first, and then you engage the second wave. We understand the need to concentrate on hospitals first, especially in the eastern part of the city, but issues and concerns of family-based family doctors should have been dealt with immediately in the second wave. However, we had problems getting on anyone's radar screen. Flags were going up all over the city that family doctors in particular were confused and needed directions in order to care for their patients and to protect

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[127] *SARS Commission Public Hearings*, September 29, 2003, pp. 96-98.

[128] *SARS Commission Public Hearings*, September 29, 2003, p. 101.

[129] *SARS Commission Public Hearings*, September 29, 2003, p. 126.

> themselves, their families and their staff. While the media started to direct SARS people to SARS clinics, Telehealth and emergency nurses were directing patients with SARS-like symptoms to see their family doctors[130].

Another critical front line group of health care professionals who were not included in the public health and government communications or response were the radiologists. Radiologists were responsible for creating and interpreting diagnostic imaging in order to detect and diagnose disease. They practice medicine in hospitals or in Independent Health Facilities, of which there are 600 in Ontario. Radiologists and their technologists colleagues were directly involved in the care of SARS patients, yet they received no communication or support from public health. To fill the gap, Medical Imaging Clinics of Ontario provided assistance to Independent Health Facilities. As Dr. Priditis, Executive Vice President of the Ontario Association of Radiologists, stated:

> As imaging specialists we did the best we could to assemble, adapt and disseminate important information but we're imaging specialists, we're not infectious disease specialists or public health specialists and there's no doubt that had the Medical Officer of Health responded to our concerns and worked with imaging specialists to develop a detailed plan we might have done much better.[131]

Other health care professionals whose links to public health, particularly in Toronto, were lacking during SARS were the Community Care Access Centres. They entered the homes of and provided care to people who may have previously been in hospitals, and therefore needed information on the status of the various hospitals as well as the precautions that their staff should be taking. Julie Foley, Executive Director of the Scarborough Community Care Access Centre, described the problem as follows:

> One of the areas of communication particularly relates to that with public health. In Toronto, because of how the public health department was so stretched, we did not have the direct link to public health that many of our sister CCAC's had in other areas and that needs to be strengthened in the future. There were times when the CCAC's in the outlying GTA would get some specific instructions from their public health departments that we did not receive and that was difficult to then try and sort out which directive from where or which piece of advice from where was the most appropriate for the client population we were serving. And we do think it's important that health providers outside the strict publicly funded system are included in communications. There were many healthcare providers who provide ancillary service to our clients, Meals-on-Wheels, a whole community of services that didn't have enough information about how to manage. So that we would be serving a client using a certain level of precaution and then

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[130] *SARS Commission Public Hearings*, September 29, 2003, p. 114.

[131] *SARS Commission Public Hearings*, September 30, 2003, p. 202.

> some other community provider would be in there not knowing what kind of precautions it should be exercising at the same time.[132]

Ms. Janis Leiterman, National Director of Clinical Services for the Victorian Order of Nurses, gave concrete examples at the public hearings of the difficulties caused by inadequate links between public health and other health care sectors, in this case the home care sector:

> In the beginning, my best source of information was The Globe and Mail and CBC News. VON Canada Branches in Ontario were receiving individuals under investigation for SARS before we knew what this meant. Staff thought they were SARS patients without knowing in advance which meant that we not only had no protective gear but didn't know it was required, without knowledge about how to manage and without knowing whether the POC, in fact, wanted this. One example is a nurse who had just completed his own course of chemotherapy, visiting a person under investigation for SARS without any info from the CCAC re: the patient's status so there was no indication of the need to wear protective gear. The next day when VON was informed by the CCAC of the patient's status, the nurse had already seen a full day's caseload of other patients. The lack of information for the home care community sector led to exhaustive efforts to get information from the Ontario government for the community. This scenario played itself out at the national, provincial and regional levels. For example, feedback from nurse managers revealed that calling their regional Public Health Departments sometimes resulted in speaking to a casual, part-time worker, giving advice about which they knew very little, likely reflecting under-funding of the public health sector and recruitment of emergency staff. The advice at times varied from worker to worker between levels of staff and from region to region. I want to point out that there was excellent support from public health departments and CCACs in many cases. It simply varied. I have four (4) quotes from my internal debriefing that I'd like to share. The first branch: "This branch doesn't have any CCAC contracts so we contacted the public health department for advice. They were always excellent in terms of their response time. You might not hear for six (6)hours, but you always heard back the same day." A second branch: "The public health department was of little use because I couldn't get through on their lines." A third branch: "The public health department was difficult to access. My voice mail messages were never returned." And a fourth branch: "Our CCAC advised us to call the public health department for direction but then they didn't always like the answer and didn't want to comply.[133]

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[132] *SARS Commission Public Hearings* September 29, 2003, p. 66.

[133] *SARS Commission Public Hearings*, October 1, 2003, pp. 60-61.

SARS showed that links between public health and other parts of the health care sector need to be strengthened. Public health bears responsibility for outbreak prevention and management of communicable diseases. To do this effectively, they must ensure an ongoing, active role with all parts of the health care sector, since an outbreak can originate and can spread at any point in the network of individuals, facilities and agencies that provide health care in Ontario.[134] It is not only critical that public health be able to communicate quickly and effectively with the various health care workers and organizations impacted during a public health emergency, but those same health care workers and organizations need to be able to have clear and direct access to public health for information and assistance.

Strengthening links with all aspects of health care can only help bolster public health's ability to detect emerging infectious diseases in the community. For example, Dr. Abells, described the beneficial role that family physicians could play in this regard:

> The acute shortage of family doctors and public health staff have left the community vulnerable. Better planning and coordination at the provincial level between these sectors and integration at the local level would provide both levels with enhanced ability to respond to outbreaks. Family physicians need to be better supported in fulfilling their roles in the daily care of their patients in their capacity as sentinels in the system and in responding to patient needs in the event of an outbreak. Family doctors are in a key position to recognize emerging illness trends as they appear. If they see a recurring or unusual pattern of patient infectious disease symptoms, they should be able to easily share these findings with the local public health department and the central coordinating agency. Public health nurses should be assigned to family physician's offices to ensure better integration of primary and public healthcare, not only for surveillance purposes but also to address the health promotion and prevention needs of the patient population.[135]

This lack of two-way communication was evident for the emergency response sector as well. When public health became overwhelmed during SARS, the emergency medical services units assumed responsibility for performing public health duties for their own staff. They did their own notification, contact tracing and referrals for paramedics, fire and police. However, they had no link to public health to provide what little assistance they were seeking from time to time. Mr. Farr explained the problem as follows:

> One thing we didn't have was a direct line to Public Health. So if we wanted to phone to inquire about something, we had to enter the queue with every other citizen who's trying to get through to public health. We were fortunate

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[134] Under *the Health Protection and Promotion Act*, Part IV, local Medical Officers of Health and the province have clear responsibilities for monitoring infectious diseases, reporting them, and giving direction and orders to prevent their spread.

[135] *SARS Commission Public Hearings*, September 29, 2003, p. 130.

> that our community medicine nurse had come from Public Health and had background channels that we could get information to Public Health.[136]

Health care workers, in hospitals and in the community, are the eyes and ears of public health, before and during an outbreak.

SARS demonstrated that public health links with health care workers, health care organizations and community care agencies are deficient. The communication links and relationships necessary to effectively manage an outbreak were not present before SARS and it proved difficult, and for some impossible, to forge them in the midst of a crisis. It is critical that these relationships and links be made before they are required.

Because Ontario had not planned for an outbreak, the necessary relationships had never been identified, much less established before SARS hit. There should be defined links with each key organization, combined with the ability to communicate emergency messages to front line staff regardless of the time of day or the day of the week. As the Victorian Order of Nurses recommended in their submissions to the Commission, there needs to be,

> a point person, identified at every organization, to ensure the ability to quickly dialogue with key individuals about any given emergency in any sector. It is too late to start building a communication system once an emergency strikes.[137]

It is not good enough to leave it to each individual public health unit to create these necessary links within the boundaries of the unit. A provincial plan is required, developed with the advice of local Medical Officers of Health's, to ensure effective communication between public health and the rest of the health care system. The individuals and groups need to be identified, communication links and relationships need to be established in advance, and a clear assignment of roles and responsibility established for the maintenance and operation of direct linkages.

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[136] *SARS Commission Public Hearings*, September 29, 2003, p. 161.

[137] *SARS Commission Public Hearings*, October 1, 2003, p. 78.

Problem 22: Lack of Public Health Surge Capacity: The Toronto Example

The sudden workload imposed by SARS on local public health units was overwhelming. The hardest hit jurisdiction was Toronto, where the workload snowballed with each passing day of the outbreak. While the same was true of other public health units, Toronto is selected as an example because it had the greatest number of cases. This staggering workload included:

- Approximately 2,000 case investigations. Each took an average of nine hours to complete.
- More than 23,000 people identified as contacts.
- Of these, 13,374 placed in quarantine.
- More than 200 staff working on the SARS hotline.
- Over 300,000 calls received on the hotline.
- On the highest single day, 47,567 calls.

In one of the world's most multicultural cities, Toronto Public Health had to ensure that all communities were reached. Print and web materials were translated into 14 languages. Staff at the hotline had access to translators for non-English speaking clients.

Staff worked long hours and demonstrated remarkable dedication to the response effort. Twenty-hour workdays were not uncommon.

The observations in this section do not detract from the remarkable efforts of everyone at Toronto Public Health. This section simply points out that the system was unprepared to deal with an outbreak of this magnitude. The problem was not any lack of dedication and effort, but the fact that it was impossible in the middle of a rapidly expanding crisis to create the necessary infrastructure. For instance, there were not enough people to work the phones. As a result, people who waited on hold for hours would vent their anger at some unfortunate Toronto Public Health employee when they finally got through. If the employee didn't have all the answers (which no one did in early days of outbreak) it simply increased the callers' frustration and level of anger. Staff described the following typical scenarios:

> The patients are often fearful, upset and/or angry and often direct these emotions at TPH staff. Hospital staff see TPH worker as expert with all the answers. Anger is directed at TPH staff when answers are not known.
>
> A contact follow-up staff calls a woman in quarantine twice a day. She is upset because someone else has also contacted her. She states she has not

> received her mask and is isolating herself from her children. Her kids are young and do not understand why they can't hug and kiss her now. She has no food, little money, and has no way of getting friends to deliver any supplies as her whole community is in quarantine. TPH staff provides info about free food delivery as needed and asks if it if okay to have someone call her to provide psychological support. On the way home from work TPH staff person drops off a bag of food for this family.

There was a shortage of staff at Toronto Public Health to do the day-to-day work of identifying contacts, calling them to provide accurate and timely information and to maintain consistent contact throughout the period of quarantine. Some surge capacity was achieved by redeploying staff from other public health work. Additional capacity was achieved at times from other health units and the federal government. Dr. Sheela Basrur, Dr. Barbara Yafee and Dr. Bonnie Henry noted in a recent article:

> Public health staff and physicians from the City of Hamilton, County of Lambton, Middlesex-London, City of Ottawa and Leeds, Grenville and Lanark Health Units as well as the federal government also provided on-site assistance, which proved invaluable in sustaining the TPH response.[138]

However, even with this out-of-town assistance and the redeployment of workers from other public health jobs, there simply were not enough people to do the work and there were insufficient internal coordinating mechanisms to ensure that the information was both obtained and provided in a smooth and efficient manner. Consequently, a number of significant problems arose during SARS around the ability of Toronto Public Health to handle the massive workload.

Not every SARS contact was identified and followed up. Some family members of SARS patients, including some individuals who lost family members to SARS, report that they never received any contact from Toronto Public Health. It was only through watching the news or through information received from another source[139] that they were aware of the need to go into quarantine. Other witnesses reported being contacted late into their quarantine. For example one family, who lost a loved one to SARS, did not receive any contact from public health until eight days into their quarantine. Fortunately, they knew to quarantine themselves from watching the news, so had remained at home and had not put anyone else at risk.

While some contacts were initially notified of the need to put themselves in quarantine, many reported that they did not receive regular follow-up calls, or that they did not receive supplies, such as masks, that they needed and had been promised by public health.

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[138] S.V. Basrur, B. Yaffe, B. Henry, "SARS: A Local Public Health Perspective" in *Canadian Journal of Public Health*, January-February 2004, p. 22.

[139] For example one family became aware of the need to quarantine themselves during SARS I as a result of watching the news and because one of their employers had distributed a letter outlining the information regarding who should be in quarantine.

The absence of consistent and timely contact could have profound consequences. For example, one relative of a SARS victim described how she almost missed going to the hospital to say good-bye to her dying mother because she had not been discharged from quarantine. Otherwise the hospital would not permit her to see her mother before she died. After many calls to many different numbers, she was finally able to contact a physician at a reporting hotline who released her from quarantine.

The volume of contacts meant it was not possible to ensure consistency and continuity by assigning a particular case to one or even two public health workers. Many observers described the frustration of having to repeat their case history and that of their family members over and over because they were called by different Toronto Public Health staff. Either the information they had previously provided had not been recorded or that record had not been passed on or reviewed by the later staff contact person. Because a paper based system was used to record contact information – another systemic weakness noted above in this report – the knowledge of the Toronto Public Health staff member depended on having a complete file in front of them. This did not always happen. Thus the person who may have been in contact with a suspect or probable SARS case would receive a call from Toronto Public Health staff who had little or no knowledge about the person they were calling. And when a patient or a contact called public health with questions or information, they often ended up having to deal with someone with no knowledge of their case. Many who dealt with Toronto Public Health had to repeat the same information many times throughout their quarantine and sometimes many times in a single day. One SARS victim described her frustration:

> When you called [Toronto] public health, no matter what your inquiry is, no matter whether they already had a file started for you, you had to go through the entire process. There was a standard sheet that they had to fill out with every intake. Do you have any idea how frustrating that is? … I ask public health the following things: we cannot keep calling and having to start all over again every time we call, they have to fill out this intake sheet; it confuses the people that we are speaking to, it makes them panic about our situation when as public health department, you are already aware of our situation. Our file is sitting somewhere in another desk. You have to allocate someone to look after our family and this particular outbreak. We cannot keep having different people pick up and take over every time we call with a question. Every single family member has not been contacted yet to give them proper directions. We need masks, we need some direction, no one was prepared for this quarantine.

This inability to streamline information or to assign specific workers to specific contacts raised questions for many about confidentiality. Many witnesses expressed concern that they were being asked to provide private personal and health information, over the telephone, to different people with whom they had no prior contact or knowledge. Moreover, they had no idea what happened to that information once it was provided.

At other times contact, when it came, was not always helpful. For example, one family was in quarantine in the early part of the outbreak because a family member was ill with SARS in hospital. The family received regular calls from Toronto Public Health, which was good. But it was not good when someone from Toronto Public Health called and asked how the family member was doing, two days after she had died in hospital from SARS. This was not a single event. Another family reported that they were called by their public health unit and asked for an update on the condition of their mother, three days after she had died. Although many of these examples speak more to lack of coordination rather than lack of staff, the result for families was the same.

Another problem to be addressed in the final report, the notification of families that a relative died of SARS, is more of a cross-system problem than a purely public health problem. The family of one SARS victim who visited their parent in hospital during the second outbreak was surprised to learn, when contacted by the Commission for an interview, that their parent had contracted SARS let alone that he had died of it. Others, while not surprised, had received no official confirmation of the diagnosis. As late as December 2003 there were still families who had not received word of the cause of death although they had made repeated inquiries. This problem will be addressed in the final report.

Despite the excellent leadership of the Toronto public health system and the hard work of its staff, these examples show a lack of systemic capacity to follow up effectively and to put together and use effectively pieces of information within the knowledge of the health unit.

A distinction must be made between adequacy of staffing levels and adequacy of surge capacity. Toronto Public Health has about 1,800 employees and questions have been raised about the proportion of staff dedicated to outbreak management and infectious disease.[140] The issue was acknowledged by a Toronto Public Health observer:

> Eighteen hundred does sound like a lot of people. The observation is correct that relative to the volume of work required in the control of infectious disease programme there were not enough staff to fulfill those responsibilities to the standard expected in a city of this size and complexity. However the communicable disease service was the largest service in public health. There were between 250 and 300 staff people under Dr. Yaffe. Other programmes were not close to that size in terms of having staff under a single director. … Communicable disease control was under funded but at the same time it was one of the larger services and it had gotten more increases since amalgamation than any other services.

However one addresses this question of staffing levels as between infectious disease and other health programmes, the fact remains that extra surge capacity is required in a significant outbreak.

The solution is not to hire large numbers of people to sit around and wait for the next outbreak to arrive. The solution is devise a system through cross-training and re-assignment to deploy more workers on the ground for the painstaking work of contact tracing and following up on those in quarantine. It speaks equally to the need for better internal information systems and a planning process which ensures that the work of core personnel and added personnel can be properly coordinated.

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[140] Naylor Report, p. 29.

The Naylor Report, in the context of the federal Health Emergency Response Teams,[141] known by the acronym HERT, emphasized the need for response capacity beyond simple clinical surge capacity:

> While the HERT model has been developed as a multidisciplinary group of clinical support personnel for "all hazards," the SARS experience demonstrates the need to be able to mobilize select groups of skilled personnel such as quarantine officers and public health nurses.

As noted below, the Public Health Branch at the Ministry of Health has done some work in the area of redeployment and more work remains to be done. One observer described the progress:

> … probably the sore thumb area that needs review first is the rapid response team epi centre and call centre functions that were the recipient of a lot of SARS money because it was a bag of cash that was grabbed while the going was good. A whole bunch of people were hired and I think we need to have the functions better identified so that the numbers and roles and competencies and deployment arrangements and all of that can be articulated clearly because no one quite understands it … there are one-half dozen rapid response teams at the public health branch comprised primarily of IMG, International Medical Graduates. The paper looks real good but I am not sure that in practice the rules and responsibilities and communication protocol are clear. So if a team is deployed to Muskoka-Parry Sound, who do they report to? Do they work under the local Medical Officer of Health? Do they report to the Chief Medical Officer of Health? How does information get collected and shared and you know, a team of what with whom?

Provincial plans and local plans are required for response to outbreaks, both large and small, which mobilizes surge capacity through redeployment of public health workers cross-trained in outbreak investigation and management.

Such plans should include prearranged agreements and memorandums of understanding between health units to redeploy workers from areas of relatively light activity to areas of peak activity. Under this system, an outbreak in Windsor might attract the temporary redeployment of workers from Toronto and vice versa. This is easier said than done; it requires a real commitment in expenditure to achieve the necessary cross-training, willingness and dedication on the part of the individuals who will be reassigned away from their homes and families and a strong cooperative motivation from all levels of the public health system to make redeployments work. The other obvious limitation to redeployment is that it will not work if the entire province is hit by an outbreak which takes up all the spare capacity of every health unit, in which case the local plans will be critical.

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[141] The National Office of Health Emergency Response Teams was established in December, 2001, by the Centre for Emergency Preparedness and Response. Following its creation, the federal/provincial/territorial deputy ministers and ministers of health unanimously endorsed the principles for the development of Health Emergency Response Teams (from Naylor Report, p. 102).

Finally, the province must collaborate with other provinces and with the federal government to ensure clear agreements for support during times of crisis. During SARS the province received help from outside Ontario as a consequence of the goodwill created between colleagues, not as a result of any formal agreement.

SARS was a wake up call. It demonstrated the need to create surge capacity by planning in advance so that every available worker can be redeployed where necessary.

Problem 23: The Case of the Federal Field Epidemiologists

The ability to mobilize and deploy human resources became crucial as local resources were overwhelmed. However, the lack of pre-existing human resource deployment protocols caused some confusion and ambiguity.

The federal government sent a number of Health Canada employees to work in the field to help with containment efforts. In the early days of the outbreak three federal field epidemiologists were assigned to Toronto, who brought a badly needed level of expertise to the provincial response. Unfortunately, the lack of clarity concerning their deployment and, from time to time, the tasks that they were asked to perform led to problems and ultimately contributed to the decision by Health Canada to pull them back from Ontario.

When the federal field epidemiologists arrived in Toronto, they were initially sent to work at Toronto Public Health. They collected and analyzed data and in the opinion of one expert had a good understanding of what was happening in the outbreak. However, they had insufficient input to the Science Committee, which needed their epidemiological expertise. Some observers thought that their expertise was not being used effectively in the tasks assigned to them.

Once the provincial the Epi Unit was operational, a decision was made to move the federal field epidemiologists out of Toronto Public Health and bring them to the provincial unit. It is a measure of the confused state of communications and the lack of coordination that to this day there are different understandings as to why and by whom this decision was made. This, in turn, created turf resentments. One observer described it as follows:

> The local health units saw them as local support and foot soldiers to help run and control the outbreak. York Region was very upset that all three were based at City of Toronto. They felt that they should have one. Then the City of Toronto got upset when they were moved up to the Ministry.

One of the epidemiologists explained the problem as follows:

> It was no longer a City of Toronto, limited to the City of Toronto, there are other jurisdictions involved, because it's a multi-jurisdiction, really the epi response should be happening at the provincial level. But the City of Toronto had made a request for the field epidemiologists and under the circumstances, of course, was very reluctant to let us go. They were still seeing huge increases every single day on an hourly basis, they still had their staff were completely exhausted and running at their ends and there was some negotiation between the province and the city about where these field epidemiologists should reside. And at the same time, you know, York Region and Peel Region and Durham Region are saying, you know we have a problem here, we don't have the same capacity as Toronto and now we have this many cases, we need a field epidemiologist to help us in this area. My personal, professional opinion is that it was the right move to move the field

> epidemiologists to the provincial level, but I understand why the city was so reluctant to let us go.

Toronto Public Health was relying heavily on the epidemiologists to conduct investigations and provide support for them in terms of managing and controlling the outbreak. The province, on the other hand, saw the federal field epidemiologists as a resource to be deployed at an overview level in the task of figuring out where the outbreak was going in order to get ahead of it, rather than to be deployed as foot soldiers to help manage the outbreak at a local level. One observer who worked for the province described this distinction in roles:

> They [the federal field epidemiologists] should not be looking at control aspects but focus on where spreading and where will go next rather than focusing on day-to-day management.

Some in the federal government also felt that the federal field epidemiologists should be utilized at a higher level. As one federal health official noted:

> They were sent there at the request of Ontario, to assist with the investigation. I believe that there was some misinterpretation, whether deliberate or not, on why they were there. And it comes back to my first point about wanting to get a picture of what was going on, is that it would not have been our intention to send epidemiologists of any kind to Ontario just to assist in collecting data. That can be done by lesser-trained health professionals, or indeed, health professionals that were trained in different ways. The whole point of analysis of data, to look at trends, to look at risk factors, to look at, for example, who's in quarantine, what's the effectiveness of quarantine, what's the effectiveness of what's happening in the hospitals, and so on and so forth, is not research. It's a fundamental part of an outbreak investigation, which gives information to change the response … Because our staff were there in order to be able to assist in the investigation, in order to be able to assist Ontario to make operational decisions. It may have been, and I believe it was, that they got drafted into other work, because that's where there were deficiencies, in terms of just collecting data and so on and so forth, whereas we, I mean that's a reflection of the whole lack of capacity across the board in Ontario, that seemed to have been evident. That it would have been our wish to assist at the level of the training of the individuals that we sent, so that we could have, we, both Ontario and ourselves, could have ended up with this picture which would then have been dynamic and then we would have been able to present together to the world in terms saying this is what's happening. We know what's happening, we changing our protocols accordingly, and so on and so forth.

Toronto Public Health felt the province was taking away badly needed resources from the direct management of the outbreak, and this created tension. In hindsight, it is easy to appreciate the perspective of each side. Toronto Public Health was desperate for any help they could get and the province and federal government were desperate for a high level of analysis of what was happening in the outbreak and where it was going. The problems and confusion that grew up around the role of the federal field epidemiologists reflect underlying problems that arose again and again during SARS: lack of coordination between levels of government, bad communication, and above all lack of a pre-planned response system that would have supplied the necessary machinery of cooperation, including insufficient appropriately trained human resources.

The federal field epidemiologists were caught in the middle of this, being pulled in two directions by two different groups. To add to all these problems, concerns were expressed that even after they were moved to the provincial level, they were occasionally asked to undertake tasks which did not make the best use of their expertise. One of the federal field epidemiologists noted:

> I think our role was clearly defined, how other people interpreted that role was not necessarily being done properly. We would run into situations where we were told there's a problem with this, go down there and deal with that data problem. And that was clearly not our responsibility to go down if the City of Toronto was having a problem with their database which made it difficult for the Ministry to figure out what was going on, it was not our role to go down there and fix the problem. But we would be asked to do that and I think that the field epidemiologists were fairly clear in saying that wasn't our role at this point and was there somebody more appropriate than us to go down and help with the situation. So I think that although the roles were defined, people's interpretation of what the field epidemiologists were there to do varied.

Even after they arrived at the province, there was confusion around their reporting structure and the proper route for work requests. As one epidemiologist noted:

> I reported to Dr. Ian Johnson as a field epidemiologist, he was our in the field supervisor when we moved to the province. However, I was receiving directions from other individuals at the Ministry as well and that's where I think Ian (Dr. Johnson) was very clear on what our roles and responsibilities were and other people were not so clear on what they were and might ask us to do things that weren't appropriate or that we had not been tasked to do.

At the time they were pulled back from Ontario in late April and early May 2003, they had been working in the field since March and had done extensive work on the Scarborough Grace outbreak, the Sunnybrook outbreak, and the York Central outbreak. They had been through a lot and the impression of one expert who worked with them was that they were frustrated and exhausted. As one federal official stated:

> It was a tough situation for everybody, and people had been down there a long time, but there was undoubtedly a sense of frustration amongst the cadre of people we did send down. And we obviously wanted to keep up their morale, and we obviously wanted to use them in the most efficient and effective way possible.

One of the frustrations faced by the epidemiologists was that it seemed as though there had been little movement by the province to recruit staff to fill their role so that they could eventually hand over their work and return to their regular employment. As one of them noted:

> I was desperately looking for someone to transfer some of my knowledge to for the provincial SARS epi team but there, those people hadn't been hired and so I couldn't do that transfer of responsibilities to people because they weren't there yet. And so the frustration was I felt that my job here was done, I was waiting to transfer responsibilities and there wasn't anyone for me to hand over to.

Despite the misunderstandings of their role, their help was greatly appreciated and in the words of one expert, they were "terrific." But the lesson to be learned from the experience with the federal epidemiologists is that surge capacity pre-existing human resource protocols need to be addressed in advance. Clarity in roles and responsibilities is required not only for those who come to help, but also for those who receive the help.

This problem was identified in the Naylor Report:

> … federal involvement in Ontario was limited by the lack of a delineated role in an organizational structure, lack of data for outbreak investigation, and absence of business process agreements for inter-jurisdictional collaboration."[142]

In the case of the federal field epidemiologists, there were unrealistic expectations about their role. As one expert who worked with them noted "they were expected to come in and solve all the problems." In times of crisis, when people are being asked to pitch in and help out, expectations must be clearly established in advance for their initial deployment and also for their orderly pull-back as others come on board. Without these understandings clarified in advance, people will simply not come forward to help.

The case of the federal field epidemiologists demonstrates many of the underlying problems of Ontario's SARS response noted above: poor coordination among levels of government, poor coordination of Ontario's public health response, and above all lack of any advance plan for outbreak management.

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[142] Naylor Report, p. 31.

6. Improvements since SARS

After many years of decline in Ontario's public health infrastructure, SARS has finally focused the attention of the government and the public on the public health systems that protect us from infectious disease. SARS exposed the weaknesses in these systems. If we are to learn lessons from SARS these weaknesses cannot be ignored. The problems in our public health system must be fixed. If the next outbreak of infectious disease strikes Ontario as unprepared as it was for SARS, with a public health infrastructure as weak as it was during SARS, the province will be in serious trouble.

It is beyond the Commission's mandate to monitor the implementation of government initiatives designed to address the public health problems that emerged during SARS. The Ministry has reported to the Commission on various reforms that it is presently undertaking and it is therefore appropriate to note them at this time. The Commission of course is in no position to evaluate these pending and proposed initiatives or to predict whether they will all be successfully implemented. Decisions in respect of their implementation are entirely a matter for the government and beyond the scope of the Commission's mandate.

Some system improvements have been made since SARS, including the recruitment of a new Chief Medical Officer of Health. The Ministry of Health has announced changes that involve both internal organizational enhancements and external system collaboration. Some of those changes are noted below.

Some of these changes by the former and the present governments respond to problems that are not addressed in this interim report but will be addressed in the final report.

An example of internal organizational change is the creation of an Emergency Management Unit, (EMU) to coordinate the development of a Ministry emergency preparedness program, integrate it into Ministry business planning, identify the infrastructure requirements for its maintenance and develop a quality improvement program for emergency readiness. The Ministry's plan calls for the EMU to work with the Public Health Branch, other Ministry divisions, other ministries and local public health units on policies, procedures and protocols. It has been identified as the Ministry's principal link for broad government collaboration on emergency management and pandemic preparedness.

Another Ministry organizational change involves the creation by the Public Health Branch of a Surveillance and Outbreak Management section housing an Epidemiology Centre, an Epidemiological Investigation and Policy Unit, Rapid Response Teams and a Public Health Call Centre. With the creation of this section, the Ministry seeks to improve its surveillance, surge capacity, information flow and its capacity to analyze data. Other changes to the federally funded Integrated Public Health Information System (iPHIS) are expected to improve data collection and transmission substantially and to support outbreak management with improved contact, case and quarantine management.

An example of the Ministry's new approach to system collaboration is the creation of task forces made up of representatives from Health Canada, organized labour, other ministries and colleges that regulate medical professionals to develop and refine infection control and surveillance standards for acute care facilities and community health care settings. In addition, the Ministry is leading a standing, integrated coordinating committee of senior provincial government officials from all relevant ministries created to address emergency preparedness issues.

On the national and international fronts, there are signs that progress is underway. This was signaled in the November 20, 2003 Speech from the Throne:

> Your new government … is keeping its commitment to work cooperatively with the federal government on heath care, in the interests of Ontarians …
>
> [Y]our new government will continue to work with Ottawa to fix health care, instead of merely affixing blame.

To this end, the Ministry has begun to work closely with Health Canada in connection with the incorporation of World Health Organization requirements relating to SARS surveillance and management. The Ministry has adopted certain public health measures from Health Canada and put them in place in the event of SARS re-emergence and has revised quarantine protocols to reflect Health Canada guidelines.

As was noted above, although some work has been done post-SARS to develop a provincial pandemic flu plan, it is not yet completed. However, the Ministry has held workshops with a wide range of internal and external stakeholders from both health and non-health sectors to assist in the development of the plan. Representation was included from emergency management, labour, municipal affairs, community safety and correctional services, agriculture and food and community and social services. The current draft plan is aligned with the Canadian Pandemic Influenza Plan, released in February 2004, to be consistent in language, format and definitions. Drafting efforts continue in order to ensure clarity of roles and responsibilities between provincial and local levels and within each level as well as to identify roles and responsibilities by position. The current draft is aligned with the structure of the national plan and incorporates full acceptance of the WHO phasing of a pandemic. The Ministry has indicated to the Commission that its target is to have a consolidated plan for use in the field ready to be released by the end of May 2004. Once the Ontario Pandemic Influenza Plan is developed, planning across all provincial ministries can move forward.

In order to address the serious problem of the lack of a sufficient supply of personal protective equipment for health care workers, patients and others that arose at the outbreak of SARS I, the Ministry has begun to stockpile and secure its supplies. The Ministry reported that a two-month stockpile of personal protective equipment, including masks, gloves, gowns, eye protection and other clinical supplies, for a community the size of Toronto is available and could be distributed quickly through a central distribution system.

Insufficient human resources at the public health unit level not only impeded efforts to gather and analyze important data relating to the spread of SARS but also made effective contact tracing and the application of quarantine management procedures almost impossible.

The Ministry has taken some steps to assist local public health units to acquire more staff with the necessary expertise in managing infectious diseases by allocating funding for 180 positions at the local health unit level. It remains to be seen how long this will be maintained.

The Ministry has informed the Commission that it distributed SARS Outbreak Directives to all provincial acute-care facilities in October 2003 and to all other health care facilities in December 2003. The Directives relate to infection control and surveillance procedures for all health-care sectors in the event of another SARS outbreak. The Ministry has indicated that the Directives can quickly be adapted for use during an influenza pandemic or other infectious disease/public health emergency. The Ministry required that all acute-care hospitals confirm that all staff members have been trained in the Directives as of March 31, 2004. Non-acute care facilities and Community Care Access Centres have been asked to provide confirmation of training by May 1, 2004.

A febrile respiratory illness (FRI) screener has been distributed to health-care providers across the province in order to assist in assessing patients/clients who present with a febrile illness. In addition, the Ministry has reported to the Commission that it has developed infection control and surveillance standards for febrile respiratory illness for non-outbreak conditions. The Ministry has requested the professional colleges to identify strategies to incorporate the guidelines in to their respective professional practice standards by July 1, 2004.

The Ministry has advised the Commission that a number of initiatives have been undertaken to facilitate a more effective local response to public health emergencies. The strategies include the following: a 20-bed mobile critical care unit, known as the Emergency Medical Assistance Team (EMAT), that can be deployed on 24 hours notice anywhere in the province in situations where a health emergency is overwhelming local resources; a Designated Hospital model is being finalized to respond to situations in which local health resources are overwhelmed by an infectious disease outbreak such as SARS; the Patient Transfer Authorization Centre (PTAC) has been set up with appropriate authorizations protocols to provide a provincial patient tracking system that will facilitate surveillance of patients with FRI who are being transferred between facilities or discharged home; negative pressure rooms, that are used in the treatment of air-borne infectious diseases, across the province have been identified by region, site and type on the CritiCall database which can be accessed by all acute-care facilities; rapid discharge protocols have been developed to facilitate patient discharge from acute-care hospitals to long-term care facilities or home in the event of a health emergency.

The Ministry advised the Commission that it has taken steps to address compliance with the Directives through hospital infection control audits. Every Ontario hospital has confirmed to the Ministry that it has done a thorough review of its infection control procedures and has put proper infection control measures in place. In the future, rigorous infection control audits will become part of each hospital's ongoing monitoring and reporting to the Ministry and the public.

As has already been noted, Ministry communication with health-care providers and the public was neither timely nor clear during the SARS crisis. The Ministry has reported to the Commission that it has enhanced its capacity to rapidly communicate with health-care providers and with the public in a health emergency. It has indicated that "Important Health Notices" and other critical information documents can be distributed to all health-care providers in the province through an integrated email/fax/postal system that will facilitate the distribution of timely and accurate information. These Notices can also be used to communicate appropriate infection control and surveillance measures, including directives and standards, during a health emergency. The Ministry has reported to the Commission that it has its own multi-media web server that will support the communication of web-casts with 24-hour notice. It also has the capacity to broadcast live from Queen's Park with international news conferencing capability (including satellite). Within the Ministry, the Emergency Management Unit, the Public Health Branch and the Communications and Information Branch have established notification protocols in the event of a potential health emergency. The Ministry also advises that it has modified and enhanced its crisis and risk communications strategy by adopting the CDC model.

To begin to address a weakness identified by the Provincial Auditor, the Commission has been informed that the Ministry has started to undertake spot audits to determine whether local health units are meeting mandatory infection control guidelines.

Other strategies being employed to deal with public health human resource needs include: a protocol for emergency out-of-province recruitment and licensure has been put in place; a registry has been established through the Registered Nurses Association of Ontario to facilitate access during an emergency to healthcare workers, including nurses and respiratory therapists; a system of on-call infectious disease specialists to support clinical diagnosis of patients with suspected illnesses has been put in place; and a plan is in development to provide psychological assistance to health care workers and to the public during and after a health emergency.

The measures implemented and contemplated evidence a laudable determination to address the many public health weaknesses identified in this report. These problems, however, are deeply ingrained and systemic. They can only be addressed through a sustained commitment that may take years to bear fruit. History has shown that governments, not matter how well intentioned, do not always have the stamina to oversee changes that require a long-term dedication. This was recently expressed in an audit of the management and planning functions at the CDC. The audit, by the highly regarded U.S. General Accounting Office, underlines the challenge of making fundamental, long-term change. It stated:

> Experience shows that successful major change management initiatives in large private and public sector organizations can often take at least 5 to 7 years. This length of time and the frequent turnover of political leadership in

> the federal government have often made it difficult to obtain the sustained and inspired attention to make needed changes.[143]

These pending and proposed improvements exemplify an obvious present desire to fix the public health problems revealed by SARS. It is beyond the Commission's mandate to evaluate or monitor these initiatives. The government's efforts to ensure the province will not again by confronted by the same problems that arose during SARS, will be effective only if it dedicates adequate funds and makes a long-term commitment to reform of our public health protection systems. As in most areas of human endeavour, actions speak louder than words. Only time will tell whether the present commitment will be sustained to the extent necessary to protect Ontario adequately against infectious disease.

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[143] U.S. General Accounting Office, *Centres for Disease Control and Prevention: Agency Leadership Taking Steps to Improve Management and Planning, but Challenges Remain*, (Washington, D.C., January 2004), pp. 2-3.

7. Naylor, Kirby, Walker

Three excellent reports have recommended public health improvements in the aftermath of SARS.

Dean David Naylor's federal report recommends a Canadian "CDC north" supported by federal initiatives and transfer payments to help the federal government and the provinces cooperate in the fight against infectious disease. A key contribution of this report is a blueprint for a stronger federal presence in a supportive and co-operative posture towards the provinces rather than an operational or confrontational role.

Senator Michael Kirby's report recommends a similar federal approach including a communicable disease control fund to help the provinces build up their disease surveillance and control capacity.

Dean David Walker's Interim Ontario report recommends a series of measures to meet the problems in Ontario's health care and public health systems demonstrated by SARS. More recommendations are expected in the final report.

These three reports share a common vision for the renewal of our public health systems through increased resources, better federal-provincial and inter-agency cooperation, and system improvements. They bear close study and great consideration. Their methodology and approach are sound and their recommendations are solidly based in their respective expertise. Based on the evidence it has seen, the Commission endorses the major findings and recommendations of all three studies.

The Commission comes to its task from a different perspective. An outsider to the medical, scientific and governmental communities, it is not an expert body. It would be inappropriate to duplicate the work of the earlier reports in their fields of expertise. The best contribution the Commission can make, particularly at this interim stage, is to focus on the evidence gathered thus far and the lessons and principles learned from SARS that emerge from that body of evidence in respect of Ontario's public health system.

8. Federal-Provincial Cooperation

One of the biggest problems during the Ontario SARS crisis was the inability of the federal and provincial governments to get their acts together. A few people of exceptional talent from both levels of government did their best to bridge the gap and make things work. Unfortunately they were unsupported by any machinery of cooperation or any tradition of working together to solve problems.

In the light of all the recommendations for change in public health systems, federally by Dean Naylor and Senator Kirby, and provincially by Dean Walker and this Commission, the evidence from SARS makes one thing crystal clear: the greatest benefit from new public health arrangements can be a new federal presence in support of provincial delivery of public health. The greatest danger from new public health arrangements can be further turf wars between the federal and provincial governments, turf wars of the kind that so badly hampered our national, provincial and municipal fight against SARS.

Too many good ideas in this country have been destroyed by mindless federal-provincial infighting. The most noble and appealing proposals for reform falter so often in Canada simply because of the inherent bureaucratic and political mistrust between the two levels of government. If a greater spirit of federal-provincial cooperation is not forthcoming in respect of public health protection, Ontario and the rest of Canada will be at greater risk from infectious disease and will look like fools in the international community. While there are hopeful signs that more cooperation will be forthcoming, noted above, it will take hard work from both levels of government to overcome the lack of coordination demonstrated during SARS.

Ontario and Canada must avoid bickering and must create strong public health links based on cooperation rather than competition, avoiding the pitfalls of federal overreaching and provincial distrust.

9. Independence and Accountability

There is a growing consensus that a modern public health system needs an element of independence from politics in relation to infectious disease surveillance, safe food and safe water, and in the management of infectious outbreaks.

A number of local Medical Officers of Health noted the need for a greater degree of independence for the Chief Medical Officer of Health. To quote two of them:

> The Chief Medical Officer of Health should not report to any specific Minister but perhaps to a neutral non-political third party to take information to Cabinet. It would be preferable if there was continuity rather than intermittent political people in the reporting structure …
>
> Public health must be independent of political interference both at the provincial and local level. Not only is the Chief Medical Officer of Health a position that must be out of the political spectrum, but local medical officers of health must also continue to enjoy that position.

It is one thing to say that the Chief Medical Officer of Health needs to be more independent. It is another thing to understand what independence means; independent from whom? Independent to do what? It is yet another thing to prove that any public servant should be independent from the ordinary systems of government accountability. In a democratically accountable system any claim for independence from government, in the exercise of direct power over citizens and in the expenditure of public funds, must be subjected to intense scrutiny.

Whatever independence may be required by the Chief Medical Officer of Health for public health decisions during an outbreak and for the right to speak out publicly whenever necessary, he or she should remain accountable to the government for overall public health policy and direction and for the expenditure of public funds. Public health is a function of government. It is the legitimate business of government to set overall policy and spending priorities. If the government wants to increase or decrease the proportion of public funds being used to promote bicycle safety or infection control, that is perfectly legitimate. At the heart of democratic decision making is the principle that the elected government, accountable to the public through the Legislative Assembly, sets the priorities for government activities and decides how public funds are spent, and takes responsibility for its performance. One public health official noted that members of the public, if things go wrong in the public health system, will say:

> I want to know, who do I vote out?

There must be a clear line of political accountability for public health performance. It is one thing to give the Chief Medical Officer of Health a direct pipeline to the Legislative Assembly and the public, to point out areas where more funds should be spent and to warn of dangers if programmes are not instituted. Also to give the Chief Medical Officer of

Health a clearly defined independence in respect of operational decision-making, in deciding whether to say a disease outbreak is over or in deciding whether to quarantine large numbers of people. It is quite another thing to set the Chief Medical Officer of Health above the democratic process in relation to overall policy direction and priorities.

Necessary independent powers to warn the government and the public about dangers to public health, and autonomy in respect of operational decisions in the management of outbreaks, should not be confused with the independent power to make public health policy and decide how public funds are spent.

On the evidence examined thus far, the Commission, as noted above, has found no evidence of political interference with public health decisions during SARS. The investigation continues and more will be said about this issue in the final report on the basis of all the evidence examined.

The problem is that many people suspected political interference and many were convinced that politics was somehow at work behind public health decisions. However, no one interviewed thus far is able to recall any statement or any action by anyone that provides evidence to support that impression. Whatever the commission's eventual finding on this issue may be, the problem must be addressed of public perception of the necessary degree of independence of the Chief Medical Officer of Health and the public health system generally.

As noted above, a consensus has developed that machinery is necessary to give the Chief Medical Officer of Health a measure of political independence. Dr. Richard Schabas, a former Chief Medical Officer of Health for Ontario, told the Commission at its public hearings:

> I think it [the public health system] has to be arms-length from the political process. I've avoided discussing the impact of politics on this outbreak but I think that to ensure that there's public credibility, that the public understand that the public health officials are acting only in the interests of public health and are not influenced by political considerations, that this has – or that we have to put greater political distance between our senior public health officials and the politicians.[144]

There is a consensus that the office of Chief Medical Officer of Health needs a greater degree of actual and perceived independence from government. The key question is what precise kind of independence is needed and how that independence is best balanced with the necessary degree of accountability.

Senator Kirby pointed out that too much of an arm's length distance between the Chief Medical Officer of Health and the government would affect not only accountability but also the ability of the Chief Medical Officer to have the close links with other parts of the provincial health care system that this Commission found to be inadequate during SARS.

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[144] *SARS Commission Public Hearings*, September 30, 2003, p. 28.

The Naylor Report in advocating a new Chief Public Health Officer for Canada noted the need for a measure of independence in that office. The report pointed out that British Columbia and Manitoba both have independence safeguards of the kinds recommended for the new Canadian chief public health officer.

In British Columbia, the *Health Act* provides that the Provincial Public Health Officer shall report to the public, in the way he or she considers most appropriate, if in his or her view the public interest requires a public report on health issues in B.C. or the need for legislation or changes in policy or practice. In addition to the power to report to the public whenever the Provincial Public Health Officer thinks fit, he or she must give an annual report to the minister who is obliged to lay the report before the Legislative Assembly as soon as practicable.

In Manitoba the Chief Medical officer of Health, while accountable to the department and the Minister, has an arrangement that permits him or her to function independently when necessary with a specific power to issue public health advisories and bulletins:

> While accountable to the Department, the Chief Medical Officer of Health may function autonomously when necessary in the interests of the health of the public. Under these circumstances, the Chief Medical Officer of Health has the authority to issue public health advisories and bulletins, or take other actions. The Chief Medical Officer of Health will inform the Deputy Minister and/or the Minister prior to such actions or as soon as practically possible, in accordance with established protocols.

In Quebec, the statute that establishes the Quebec National Public Health Institute provides that the public health mission of the Institute is not only to inform the Minister but also to inform the public. The Institute's mission includes:

- informing the Minister of the impact of public policies on the health and well-being of the population of Québec;
- informing the population of the state of public health and well-being, and of emerging problems, their causes, and the most effective means of preventing or resolving them

The Walker interim report recommended that the Ontario Chief Medical Officer of Health should be able to report directly to the Legislative Assembly and to make public comment on significant public health issues independently.

One Medical Officer of Health, who saw no need for the structural independence of the Chief Medical Officer of Health, thought however, that the freedom to speak out on public health matters should be guaranteed:

> … [The]Chief Medical Officer of Health must be free to speak out on issues and produce reports that contain recommendations that are not yet government policy and may be controversial.

One knowledgeable observer concluded that a position within the Ministry, coupled with the right to report independently to the public, would provide the right balance between accountability and independence:

> It would be my preference for the Chief Medical Officer of Health to retain administrative control and internal influence that comes with being an Assistant Deputy in the Ministry of Health and to have the agency as support to the Chief Medical Officer of Health with the obligation to make annual reports to the legislature with advance notice to the Minister, perhaps using the *B.C. Health Act* as a template, with the additional safeguard that the Chief Medical Officer of Health in his or her judgment can make additional reports public through any appropriate means. That way the Minister gets a heads up in the ordinary course of an annual report but the Minister is not the gatekeeper if the Chief Medical Officer of Health thinks something should be made public.

The proposed power to report directly to the public, combined with independence in relation to the management of infectious outbreaks, provides a significant measure of independence to the Chief Medical Officer of Health. It ensures that on important public health issues the Chief Medical Officer of Health cannot be muzzled and that the public can get a direct sense of emerging public health problems without passing through any political filters. It ensures both the reality and the public perception that the management of infectious disease outbreaks will be based on public health principles and not on politics.

Should the Chief Medical Officer of Health remain within the Ministry of Health and Long-Term care? Or should the position be hived off from the Ministry into an independent agency with a line of accountability to the Legislative Assembly similar to independent watchdog officers like the Ombudsman, the Integrity Commissioner, the Environmental Commissioner, the Provincial Auditor and the Privacy Commissioner?

Unlike these officers, the Chief Medical Officer of Health provides leadership to a large and widely dispersed operational system responsible on the ground for infectious disease surveillance and health protection programmes. As one thoughtful observer noted, it makes more sense for the Chief Medical Officer of Health, if some machinery of independence is added to the office, to be at the table within government rather than being a watchdog off in a corner:

> It's not just a question of balancing independence and accountability. It's also a question of ensuring that the Chief Medical Officer of Health can get the job done, can fulfill the delivery of the mandatory public health programmes by the local units and carry out the responsibilities of the Chief Medical Officer of Health under the *Health Protection and Promotion Act*. If the Chief Medical Officer is in the ministry they are at the table and has a degree of influence from being at the table but also has to be part of a team to some extent. In my opinion a lot can be accomplished by working within the system provided you have a pathway and protection to speak out when needed, both procedural and legal protection.

> The Ministry needs to maintain and control policy, funding, and accountability including the transfer payment function to the local boards of health; the Chief Medical Officer of Health should oversee that. The Chief Medical Officer should retain programmatic responsibilities. Being an assistant deputy minister gives you rights of access you don't have if you're a watchdog off in the corner someplace.

The logic of this position is persuasive.

The Commission therefore recommends:

- Subject to the guarantees of independence set out below, the Chief Medical Officer of Health should retain a position as an Assistant Deputy Minister in the Ministry of Health and Long-Term Care.

- The Chief Medical Officer of Health should be accountable to the Minister of Health with the independent duty and authority to communicate directly with the public by reports to the Legislative Assembly and the public whenever deemed necessary by the Chief Medical Officer of Health.

- The Chief Medical Officer of Health should have operational independence from government in respect of public health decisions during an infectious disease outbreak, such independence supported by a transparent system requiring that any Ministerial recommendations be in writing and publicly available.

- The local Medical Officer of Health should have the independence, matching that of the Chief Medical Officer of Health, to speak out and to manage infectious outbreaks.

10. The Public Health Ping-Pong Game

Public health in Ontario including protection against infectious disease is delivered primarily through 37 local Boards of Health, which are largely controlled by municipal governments. Public health funding has gone back and forth like a ping-pong ball between the province and the municipalities.

Before 1997, the province funded 75 per cent of public health expenditure and the municipalities funded 25 per cent everywhere except in the Greater Toronto Area where the province funded 40 per cent and the six separate boroughs funded 60 per cent.

Some public health programmes, however, were funded 100 per cent by the province. One local Medical Officer of Health put it this way:

> They [the province] always make exceptions when they fell like it so there were some stated provincial priorities that they paid 100 per cent for and they started with sexual health clinics back in the 1980's and then added tobacco prevention and control and then added teaching health units … healthy babies, healthy children is one of the most recent … They pick and choose what they want to pay for …

In 1997, the Ontario introduced legislation to download all public health and many social services to the municipalities with the tradeoff that the province would assume full responsibility for education. Although public health financing was to be downloaded, the province was to maintain authority to set provincial standards. Although the province provided no funds for public health, it sought to retain control in the form of mandatory programme and service guidelines promulgated in 1997. This was dubbed the "all say, no pay" regime. It came into force in January 1998.

The rationale for downloading had nothing to do with the best way to run public health. As Mr. Tom Closson, President and Chief Executive Officer of the University Health Network in Toronto, noted at the Commission's public hearings:

> I think it's a big weakness in the Ontario healthcare system that Public Health is under the municipalities. As you might know, Public Health was put under municipalities as a tax issue, because taxation for education was moved out of the municipalities and into the province was a tax balancing effort. It had nothing to do with what would be the best way to run a healthcare system.
>
> Again, if you look at other provinces, you'll see that Public Health is part of the Regional Health Organizations and hospitals, community health, public health, are all under a single governance structure.[140]

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[140] *SARS Commission Public Hearings*, October 1, 2003, p. 188.

Public health, a much smaller budget item than social assistance or public housing, did not bulk large in the controversies and the provincial-municipal negotiations that preceded the downloading. Despite the efforts of the public health community which included the Public Health Branch in the Ministry of Health, the Ontario Public Health Association, the local Medical Officers of Health and local health boards to whom they reported, public health remained relatively invisible and efforts to maintain a stronger provincial role were unsuccessful.[146]

The total downloading of public health funding to the municipalities lasted about a year. Since March of 1999 the provincial share has increased and the province and the municipalities now share public health funding 50-50. As one Medical Officer of Health noted:

> … typically the chronology is that the municipality approves our budget on the Board's advice or not and then that goes to the Ministry and they will cover 50 per cent of the eligible costs. Up until now they have not done it on a line-by-line basis; it has been a block grant.

Although the general funding rule is 50-50, some programmes like the Healthy Babies, Healthy Children Program are funded 100 per cent by the province. This means that the global provincial contribution in any particular health unit will likely be more than 50 per cent. To take one example, the 2001 Annual Report of the Muskoka-Parry Sound Health Unit recorded the following revenue breakdown:

• Municipal Levy	33.9 per cent
• Provincial Public Health Programmes	41.8 per cent
• Provincial 100 per cent funded programmes	24.3 per cent

One difficulty with 100-per-cent provincial funding of specially picked programmes is the municipal fear that the province will start a programme at 100 per cent then withdraw the full funding, leaving the municipality holding the bag. A similar observation was made in the context of recent Toronto Public Health budget discussions:

> Past health board Chair Joe Mihevc (Ward 21, St. Paul's) said the province has a pattern of funding programs at 100 per cent initially and then requiring the city to pay 50 per cent once they're up and running.
>
> The liaison unit and West Nile virus are two prime examples.

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[146] For a helpful review see the following unpublished paper by a group of scholars at the University of Toronto: Kristina A. Millan, Howard Shapiro, Raisa B. Deber , *Who Did What to Public Health in Ontario: A Clash of Policy Communities*. (Subsequent footnotes will refer to this report as the Deber Report.)

> "They (province) can't seduce us into a program and then leave us holding the bag after they've paid the initial 100 per cent," Mihevc said.[147]

Another difficulty with the current structure of municipal funding , even though it attracts a matching provincial grant, is that there is not enough money to pay for basic programmes like infectious disease and infection control. As one local Medical Officer of Health pointed out:

> … if you look at control of infectious disease and infection control, which are the two programmes that apply here most specifically, the mandate is not strong enough and the resources are not sufficient.
>
> In hindsight, post SARS, the mandate in infection control is quite weak and even in its weakened form, we have not had the resources to implement it to a sufficient degree given the number of hospitals and doctors and number of germs and everything else.

Although the province now shares more than half the cost, it still lacks overall control over public health in Ontario. It is a basic fact of publicly funded programmes that he who pays the piper calls the tune. When the province funds public health directly, it controls the content and direction of public health. When public health is funded by the municipality, the province loses direct control and can only do its best to influence public health by indirect measures such as the mandatory guidelines published in December 1997.

So long as the municipalities fund public health to a significant degree, public health will have to compete with other municipal funding priorities. Communicable disease control is a basic public necessity that can affect the entire province if a disease gets ahead of the controls. Infectious disease control should not have to compete for scarce tax dollars. As one group of scholars noted:

> At the local level, public health is now in the position of having to constantly battle for funding, within a framework which makes it illegal for local governments to run a deficit … Such health protection services as food safety inspection are also vulnerable to political pressure: certainly, in the past, the provincial Medical Officer of Health has had to "back up" local health departments. Full municipal funding has also highlighted the fact that many public health units do not currently have enough resources to deliver even the existing mandatory programs, and some impetus for revising them downwards has lately begun. There is some concern that when difficult economic times recur, even communicable disease control may be seen as a lower priority – until the epidemics begin.[148]

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[147] *Toronto Star*, "Filion Claims Cuts Will Hurt City's Health," March 10, 2004, p. B2.

[148] Deber Report, p. 13.

The next section, "One Local Funding Problem" demonstrates in exquisite detail the problems that can arise through the present system of local funding of public health and the disinterest shown by some municipal politicians in the public interest in effective public health protection.

It is easy for the province to set minimum standards on paper, but difficult to enforce them on the ground when public health services are paid for and controlled by the municipality either completely or on the present 50-50 basis.

There are some institutional elements of provincial influence. The province must approve the initial appointment of the local Medical Officer of Health and the province appoints members to the local Board of Health, but never as many as the municipality. Although the Chief Medical Officer of Health for Ontario has some direct powers that can be exercised in an outbreak, if delegated to her by the Minister, the limited degree of provincial funding and the indirect nature of provincial authority leads to less real day-to-day control and more reliance on time consuming and difficult processes of persuasion and informal mediation. These elements of provincial influence are indirect and give the province no daily operational or administrative control over the local Medical Officer of Health or the local health unit. As one local Medical Officer of Health put it:

> … the local Medical Officers of Health report to their local Board of Health which is the legal entity that makes sure that the mandate is delivered, the connection with the province being of pretty loose accountability for boards and Medical Officers of Health to make sure that the programs were delivered. That is about it; there is no administrative reporting requirement as employees or anything like that.

Although machinery does exist to impose provincial will on a local health unit, it is the machinery of last resort, akin to managing a local conflict through the threat of thermonuclear force. As the aforementioned group of scholars noted:

> New mandatory guidelines were released in December 1997; they provide the minimum standards and requirements for the provision of public health services. However, municipalities expect "pay for say" and are strongly opposed to rigid and prescriptive standards. Ultimately the Province has "absolute power when it chooses to utilize it," but will have to decide how much it is willing to antagonize municipal governments to enforce standards.[149]

As a practical matter, guidelines and standards have proved ineffective to ensure consistency of public health services throughout the province. Although the system may look good on paper, the Public Health Branch has conducted no regular assessments to ensure compliance. As noted above, the 2003 Provincial Auditor's report found that no checks had been done in five years to confirm compliance.

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[149] Deber Report, p. 12.

> the Ministry had conducted virtually no regular assessments of local health units in the last five years to determine whether the health units were complying with the guidelines for mandatory programs and services. Such assessments were recommended in the *Report of the Walkerton Inquiry: The Events of May 2000 and Related Issues* (Part One of the Walkerton Report).[150]

While the Ministry of Health has begun some auditing of local health units, the historical lack of provincial enforcement of uniform standards leads some to suggest that the only answer is for the province to fund 100 per cent of public health programmes or at least 100 per cent of infectious disease programmes and to have a parallel uploading of provincial authority. This would thus ensure the imposition of uniform standards across the province under direct provincial control.

Others say that the need to upload funding and control to the province cannot be demonstrated at this time because the province does not at this time use its full powers to enforce the mandatory guidelines. Under this reasoning, the province should use all of its current powers before asking for more.

As noted below in the section "Central Control Over Health Protection," it is essential that the province assume greater accountability and authority over public health protection. The Interim Walker Report recommended that the province fund 75 per cent to 100 per cent of public health resources within two to five years. Views will differ as to the precise ratio and as to whether the funding for public health programmes other than infectious disease control should be uploaded to some extent.

There is a consensus that some provincial funding upload is required. One Medical Officer of Health said:

> … the 50-50 funding formula is killing us, and the Province needs to redress this issue ASAP. The province should pay at least 80 per cent. Furthermore, the Federal Government should contribute so we can maintain a surge capacity, especially if they expect us to do so much of the work in their pandemic plan. This could be part of the new deal for cities, because cities are where we are going to need the surge capacity.

Another Medical Officer of Health said:

> Overall, more funding is required within the Public Health system. I would suggest a decrease in municipal funding levels to 20 to 25 per cent. This maintenance of some municipal input into funding would maintain interest and accountability.
>
> … 100 per cent provincial funding for some specific programs, for example, control of infectious diseases programs, seems appropriate.

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[150] Provincial Auditor of Ontario, *2003 Annual Report*, (Toronto; December 2, 2003), p. 219.

Some regard a 75-per-cent provincial upload as a sensible compromise. To quote one Medical Officer of Health:

> The current public health funding has created a lot of dissatisfaction in spite of the fact that taking into consideration the Community Reinvestment Funds, the municipalities probably are accountable for 25 per cent and not 50 per cent if the funding. This however is not transparent and not well recognized. I think most people would be happy or could live with the pre-1998 formula of 75 per cent provincial and 25 per cent municipal. This is also a compromise between the current 50 per cent or the 100 per cent provincial funding advocated by certain people.

One Medical Officer of Health, asked whether the province should fund communicable disease protection 100 per cent, said:

> We are torn. The concern would be if infection control gets funded 100 per cent because it is somehow more important than a variety of other things that public health gets involved with. Others would argue and perhaps myself that there are going to be more people that are going to be adversely affected by our rising epidemic obesity and lack of physical activity and all of those things, and yet infection control and SARS have taken the spotlight, West Nile has taken the spotlight. Two men die of West Nile and all of a sudden you have a coroner's inquest. One hundred women die annually of cervical cancer in this province which is suppose to be a completely preventable cause of death and yet no one seems to want to do anything about them. So infection control, if it is funded 100 per cent because it is seen as being the most important thing that public health does, I think that the broader public health sector would have a problem with that because they do not necessarily see infection control as the most important thing that needs to be done for improvement of the public's health …
>
> It is ironic … as someone who has tried to get budgets approved at the local level, it is much easier to get local and municipal funding for a communicable disease program because it is concrete and people understand it. Voters may actually die within the current term of council as opposed to trying to get funding for something that is going to prevent mortality 20 years from now whether that is obesity or nutrition. In fact most Medical Officers of Health have found it easier to get local municipal funding for disease programs than other public health issues. So the ironic thing would be if communicable disease programmes were taken over and funded 100 per cent by the province …
>
> Reform has more to do with having a coherent system and the ability to dictate what the program and standards are across the province than adequacy of the funding … Especially when there is a demonstrated need, it is possible for local counsels to fund communicable disease control as much as anything else.

A similar view was expressed by another Medical Officer of Health:

> My council never said no to infectious disease programmes; tuberculosis, HIV would get attention, but the other stuff, health promotion, we would more difficulty to get funding for that. It comes down to what scares people the most …

Local Medical Officers of Health are leery of 100 per cent provincial funding. Although they complain about their local boards, the existence of the local board means the Medical Officer of Health is not entirely dependant on the province; they think it's better to stick with the devil they know

There is no scientific way to determine the appropriate degree of provincial funding upload for infectious disease surveillance and control. Although a case can be made for 100-per-cent funding upload, the persuasive views of a number of local Medical Officers of Health suggest that it would be sensible to upload infectious disease control to a provincial contribution of at least 75 per cent.

Opinions will differ as to how the funding formula should be changed, and whether and how much co-coordinating or direct power over public health should be uploaded to the province. The one thing on which everyone will agree is that the shifting of funding and accountability back and forth between the province and the municipalities has impaired the stability of Ontario's public health system. It is time to stop the ping-pong game and to begin an era of stable public health funding relationships between the province and the municipalities.

11. One Local Funding Problem

An example of a recent dispute between a local Board of Health and the local Medical Officer of Health on the one hand and the municipalities they served on the other hand, reveals the fight many jurisdictions have to go through for public funding. Although this occurred before SARS, and is not directly related to the response to the outbreak, it nevertheless reveals systemic weaknesses and tensions in Ontario's public health system.

In 2002, a local Medical Officer of Health in Ontario went to the Board of Health and requested a 27-per-cent increase in their budget. The Medical Officer of Health argued that the increase was necessary due to a 25-per-cent reduction in the budget between 1991 and 2001 and a 30-per-cent reduction in staffing during that same period of time. Based on the material presented by the local Medical Officer of Health, the Board of Health supported the increase in funding and approved the request. This meant an increase in the levy to those affected municipalities.

Under the *Health Protection and Promotion Act*, a local Board of Health has responsibility for ensuring the delivery of health services and programs in accordance with the *Act* and Regulations. The Board of Health was legally required to prepare an annual estimate of expenses for the next year[151] and then transmit it to the obligated municipalities by written notice. The *Act* provides that upon receipt of the written notice the obligated municipality "shall pay to the Board of Health the amounts required by notice at the times required by the notice."[152] The provision is mandatory; there is no discretion not to pay.[153] Moreover, the *Act* requires that obligated municipalities in a health unit shall ensure that the amount paid is sufficient to enable the Board of Health to provide or ensure the provision of health programs and services in accordance with the mandatory health programs and services and to comply in all other respects with the *Act* and the regulations.[154] The accountability for public funds is ensured by the presence on the Board of Health of a majority of members appointed by the elected municipal councils.

One of the obligated municipalities, in a budget report, noted

> The City Solicitor has confirmed that the *Health Protection and Promotion Act* requires an obligated municipality to pay expenses incurred by the Board of Health of the Health Unit, and that there is no discretion under the *Act* in favour of the municipality

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[151] *Health Protection and Promotion Act*, S. 59(2)(c). (This document is to be subsequently referred to by the initials *HPPA*.)

[152] S. 72(8) *HPPA*

[153] S. 72(8) *HPPA*

[154] S. 72(2) *HPPA*

Despite this appreciation that the municipality was legally obligated to pay, the councils of the obligated municipalities went on to move that the health unit budget not be approved and that staff meet with the Board of Health and report back to the councils. Thus, although the Board of Health had approved the increase and the statute required that the municipalities pay it, the municipality refused.

The obligated municipalities asked the province to intervene. The deadlock continued, with the municipalities refusing to pay. On June 14, 2002, the Association of Local Public Health Agencies (aLPHA) expressed its concerns to the then Minister of Health:

> As you know, all Boards of Health and Medical Officers of Health are required to comply with the minimum general and program standards embodied in the Guidelines. Local funding pressures not only prevent many boards of health from meeting minimum requirements, but puts additional pressures on them when emerging issues such as bioterrorism, drinking water quality, pandemic influenza, West Nile virus, etc. increase demands on resources.
>
> This situation received significant attention during the inquiry into the Walkerton tragedy. One of the outcomes of this inquiry was the key and explicit recommendation to the Minister of Health and Long-Term Care to ensure that Boards of Health comply with the Guidelines.
>
> We are very concerned that any movement toward excusing obligated municipalities from their statutory requirements runs counter to the HPPA itself, Commissioner O'Connor's recommendations, and advice received from time to time from the Chief Medical Officer of Health. It would set a precedent that would be extremely detrimental to the ability of all Ontario boards of health and medical officers of health to obtain the necessary resources required to execute their duties. This would be a significant step backwards in time when the importance of strengthening public health programs has been made abundantly clear.
>
> Your government has already committed to implementing the recommendations of the O'Connor Commission, including ensuring that all boards of health are able to comply with your Ministry's Guidelines. We hope that you as Ontario's Minister of Health and Long-Term Care will realize that refusal by obligated municipalities to pay for local public health program constitutes a serious impediment to this ability.

The response from the province, signed by the then Chief Medical Officer of Health, was to advise aLPHA that he had met with the Board of Health and representatives from the obligated municipalities to discuss the budget and that the "ministry would facilitate further meetings of representatives of the Board of Health and obligated municipalities." It is difficult to understand the need for further meetings. One cannot help but wonder why the Ministry of Health did not simply state the obvious to the councils: the law requires the local

Board of Health, an independent entity, to set the budget, they have done so and you are obligated to pay.

On August 19, 2002, the Chair of the Board of Health wrote to the then Minister of Health. The letter summarized what had transpired following the setting of the budget by the Board of Health. The Chair noted that:

> … members of the municipal councils of our obligated municipalities have met with you and your assistants over the past while, to express their concerns with the budget that has been passed by the Board of Health. We have met with members of the Ministry, as well as the Chief Medical Officer of Health, and the Mayors of our obligated municipalities in order to attempt to clarify for the Mayors our budget and budget process. I would also point out that while information has been provided to the obligated municipalities concerning the budget well before its passage, in fact, the Board of Health is comprised of twelve members, eight of whom are appointed by their respective municipalities, and these municipal representatives participated in our budget deliberations.

In the same letter, the Chair made the following comments about the proposed increase in the budget:

> The Board of Health, in passing the budget that it did, approved expenditures that move the Health Unit in a minimally acceptable manner, forward, towards meeting the mandatory programs and standards set by the Ministry. The Board of Health, and not the obligated municipalities, is the body responsible for ensuring that the Health Unit takes reasonable and responsible measures to move towards compliance, mindful of the significant pressures placed on all of our Health Units in light of the Walkerton tragedy and other significant emerging issues such as West Nile virus, food premises inspection, bioterrorism, etc.

The Chair went on to note that, although the Board of Health was confident that it had available the legal means necessary to enforce the levies, it wanted to know, before moving in that direction, whether the Ministry was prepared to fund the short-fall between the levy and what the municipalities had paid, and whether the province intended to amend the *Act* to delete the mandatory programmes. The Chair noted that they raised this issues "in light of the apparent continuing receptive ear that the Ministry has given to these defaulting obligated municipalities."

The Ministry of Health responded that they were no plans to change the current funding practice and there were no plans to amend the *Act*. The letter from the Ministry of Health went on to state:

> I would take this time to remind you how critically important it is for boards of health to foster a good working relationship with its stakeholders at the local level. The preamble to the Mandatory Health Programs and Services

> Guidelines encourages all parties involved in the delivery of public health programs and services to engage in mutually constructive dialogue. I encourage you to seek out a resolution to the current impasse with the municipalities of your area. The only solution that is sustainable is one that is worked out locally. I am of the opinion that to maintain an adversarial relationship with the municipalities can only be detrimental to the public health system.

The impasse continued. Rather than enforce the municipalities' legal requirements to pay, the Ministry of Health appointed a mediator to try to explore the potential for compromise and a billing adjustment. In effect, they were seeking to negotiate around a clear breach of the law. On September 10, 2002, the mediator proposed that the Board of Health reduce its 2002 budget request by 50 per cent for levy purposes only. This would require a partial refund to those municipalities who had already paid the levy in full. The letter states:

> The mayors who have been resisting the budget increase have agreed that this gesture on the Board's part will result in a reestablishment of meaningful dialogue between the parties respecting the current and future year needs of the health unit.
>
> I realize that it is difficult for the Board of Health to relax its principles, but we believe that by taking this step, the board will send a clear message that it is willing to voluntarily suspend its legislated right, in an effort to build a harmonious relationship with its partners.
>
> The alternative it appears, is for the board to pursue legal means of recovering the unpaid funds resulting in a potentially lengthy and expensive process, which further damages the already fractured relationships, and shifts the board's focus and energy from addressing the health unit's pressing public health issues and working towards mandatory program compliance.
>
> We would strongly urge the Board of Health to consider this last ditch effort to restore the partnership, since we are convinced that they only sustainable solution is one reached locally.

The obvious question here is why a process was set up by the Ministry to help a local municipality shirk its legal responsibility to pay for core public health programmes.

Following the letter from the mediator, the Board of Health wrote to the mayors of the obligated municipalities and invited them to attend an information session with the Medical Officer of Health and the Board of Health to discuss a possible resolution. The Board of Health went on to state that they had received a legal opinion that they were in a position to request that the court compel the municipalities to make payment in accordance with their budget but that they did not want to take that drastic step without meeting to discuss any other alternatives. In a subsequent letter, the Board of Health stated that they would be prepared to agree to put any surplus available from the 2002 year to the 2003 levy.

In a response, one local obligated municipality refused to attend the meeting, because they felt that the Board of Health had made it "crystal clear that your client is adamantly opposed to any budgetary adjustment whatsoever" and that the involvement of the Minister and his staff "in seeking an amicable and sensible solution resolution of the issues has obviously been foreclosed."

As of October 2002, the Ministry continued to communicate with the municipalities and to retain the services of a facilitator.

On October 18, 2002, the Board of Health issued an ultimatum to the municipalities: pay within 15 days or they will commence litigation. In the letter to the obligated municipalities, the Board of Health noted that the position taken by the municipalities had already resulted in significant delays in hiring staff thereby delaying addressing non-compliance with mandatory public health programmes. Moreover, the Board of Health understood that the reduction proposed by the facilitator would mean a reduction in funds from the province, since the province only matched funds actually received by a Board of Health. This meant that the Board of Health would be even further impaired in its ability to comply with mandatory programs and services. It also put the province in a conflict of interest because it benefited fiscally, by a reduction in the matching provincial grant, from any diminution in the municipal contribution. In the October 18, 2002 letter, the Board went on to point out that the proposal of the facilitator fundamentally affected the independent statutory mandate of the Board of Health and the Medical Officer of Health:

> Further, of more significant concern to the Board of Health, and what seems to be ignored by [the facilitator] in his proposals, is that the position of the Municipalities at present fundamentally affects the independence of the Board of Health and the Medical Officer of Health. If this process of passing the budget, and requiring that the levy be paid by the Municipalities is altered in this case, it will be impossible to return to a system where the budgets are set by the Board of Health and paid by the Municipalities and the Ministry in accordance with the *Act*. It will allow municipal politicians and their councils to continue to interfere with the statutory obligations of the Board of Health. This is a particularly perverse result when 8 of the 11 current members of the Board of Health are from the member Municipalities who, on behalf of those Municipalities, pass the budget and approve the procedural by-laws in the first place. Further, at least one of the Municipalities has a legal opinion confirming that it is required to pay. There has been no legal opinion provided, by anyone in this case, indicating an alternative to the opinion. The Board of Health is extremely concerned that to allow the Municipalities to do anything but pay the amounts they are required to by statute, will undermine the independence of this Board and effectively all the Boards of Health throughout the Province. This is a significant and critical public health issue which seems to be entirely ignored in the negations in this matter.
>
> It is critical that public health officials must be free to speak and act in the interests of public health. Unfortunately, the process that is being suggested

> by you will severely limit the independence of the Medical Officer of Health in protecting the public health in this area. The Board of Health has decided not to allow that to happen.
>
> In the end, the Board of Health rejected your suggestion to write the Minister as we do not believe the Minister, or anyone on his staff, has any authority to change this process short of changing the *Act*. You will recall that in an interest to resolve this matter, the Chair of the Board of Health wrote to the Minister some months ago, asking for relief from mandatory programs to allow for cost saving. This was rejected out of hand by the Minister and, as such, we find ourselves in the present position.

On October 31, 2002, in a final attempt to persuade the obligated municipalities to pay the levy without having to resort to litigation, the local Medical Officer of Health made a presentation to the mayors of the obligated municipalities, appealing to them to pay the increased levy. During the presentation, the Medical Officer of Health eloquently posed the question:

> What would the consequences be of reducing the budget? We would be gambling with people's health – even their lives. That is not a gamble I am willing to take as your medical officer of health. Especially for less than the price of a postage stamp per month per person …[155]
>
> We have heard about how our Health Unit should act as a business and make cuts rather than increase its budget. But the mission of a business is to deliver customer satisfaction at a profit. We do not have the option of eliminating programs to improve our bottom line. Our bottom line is the health of our population. If public health programs are eliminated or reduced, the health of our population will be adversely affected. We can't say, for example, that we will stop accepting any of the thousands of water samples that are brought to us. Our programs must be accessible to all. Charging for public health programs and services would limit participation by those groups of people within our population who most need them.

The Medical Officer of Health concluded:

> Our mission as I said at the outset is to protect and promote the health of our community. We are not your adversaries. We are your partners.

Finally, in November 2002, following this meeting and after making it clear to the obligated municipalities that the next step on the part of the Board of Health would be litigation, the obligated municipalities agreed to pay the levy, with the understanding that the municipal share of the Board of Health budget surplus from 2002 would be credited to the first billing for the 2003 levy.

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[155] The estimated increase in the municipal share amounted to $5 per person per year, less than the cost of one first class postage stamp per month.

In the meantime, as this battle was taking place, the local health unit had to continue to deliver programmes and services, in the midst of the uncertainty surrounding its resources. Because the province refused to insist that the law be followed, the Medical Officer of Health and the local Board of Health spent the better part of a year arguing about whether or not the municipalities had to follow the law. Unfortunately, the battle did not end there. In January 2003, two months before SARS hit, one of the mayors involved in this dispute was quoted in the media to the effect that although the battle to reduce the 2002 budget was lost, the fight would continue into 2003. Another mayor, in October 2003, listed one of his accomplishments on a campaign flyer as reducing the health unit levy. That same flyer noted that the mayor had improved roads in 2003. While improving roads is a laudable goal, roads should not be improved at the expense of public health protection measures that are required by law.

This story painfully reveals the importance of ensuring that funding for local health activities is not left to the mercies of any intransigent local council that fails to live up to its legal responsibilities in respect of public health protection. Basic protection against disease should not have to compete for money with potholes and hockey arenas. Even if most municipalities respect their public health obligations under the *HPPA*, it only takes one weak link to break the chain of protection against infectious disease. Should an infectious disease outbreak spread throughout Ontario, the municipality that cannot or will not properly resource public health protection may be the weak link that affects the entire province and beyond.

12. The Municipalities' Funding Dilemma

In fairness to Ontario's municipalities it must be pointed out that the problems of public health funding are not restricted to those few municipalities who disrespect their legal obligations. All municipalities are affected by the underlying difficulty of funding any provincial programme from the local municipal property tax base. SARS and West Nile showed that infectious disease protection has to be approached at a provincial level. It is anomalous to fund a provincial programme like infectious disease control from the limited municipal tax base. As the Association of Municipalities of Ontario pointed out to the Commission:

> Clearly, SARS, as with any epidemic has demonstrated the need for a provincial public health leadership and financing mandate to tackle global threats. Municipalities simply do not have the capacity, resources or the mandate to tackle them and should not be left vulnerable to public criticism because of this …
>
> The impact and speed at which SARS and West Nile virus spread across jurisdictions points to the vulnerability of the current structures, responsibility, authority and responsiveness of the system – both from a policy perspective and certainly the inappropriateness of subsidizing provincial health programmes by the property tax base. We may have another epidemic or pandemic to deal with in the near future, so the question is, are we better prepared than we were at the onset of SARS or West Nile virus? From the municipal perspective, there is still a significant vulnerability if there is no timely provincial policy responsibility and if financing of the public health base still rests on the property tax base. Managing such crises as SARS not only impacts public health services, it take impacts other service areas as well from police, to fire to ambulance, our communication systems and other services.
>
> The capacity of the current structure and how it is financed in order to respond to a serious situation is disconcerting. AMO firmly believes that the time is now for the province and municipal government to develop a plan that begins to better reflect the capacity and ability to pay when it comes to community health matters. We believe that this plan should start with infectious diseases and that if the province fully assumes this function, then we need to sit together to examine the structure and process for getting there while managing the rest of the public health portfolio.

Underlying the regrettable story just told are the basic systemic flaws pointed out above by the Association of Municipalities of Ontario. The Association makes a persuasive case for the province and the municipalities to sit down together and agree on the best structure to fund infectious disease protection and the best process for getting there.

13. One Local Story: Parry Sound

SARS was not restricted to Toronto. The northern community of Parry Sound had two probable cases and quarantined 697 people. To quarantine 697 people in a town of 6,500, more than 10 per cent, is the equivalent of quarantining hundreds of thousands of people in the Toronto area[156].

The Parry Sound experience demonstrates that an infectious disease like SARS can emerge anywhere in Ontario and that each local hospital and each local health unit is a vital link in the chain that protects the entire province. The Parry Sound experience also demonstrates the structural weaknesses inherent in the local Medical Officer of Health system. Parry Sound's local Medical Officer of Health had resigned just before SARS II, a later phase of the outbreak that occurred after May 22, 2003, hit. The interim Medical Officer of Health had been on the job for under a week. There was no apparent mentoring or backup system to assist him. This created a dangerous gap in the province-wide system of surveillance directed by experienced local Medical Officers of Health.

The SARS cases in Parry Sound presented at the local hospital, the West Parry Sound Health Centre, between May 23 and June 1. One patient had been an inpatient in the Orthopaedic Ward at North York General Hospital in Toronto and the other patient had visited their spouse at the same ward. They were diagnosed, treated, and transferred to the Toronto area for further treatment. Another suspect case had been at North York General for a diagnostic MRI test. Because her children were also suspect cases, and had attended day care and school, it was necessary to impose the quarantine mentioned above.

More will be said in the final report about the impact of SARS and quarantine on Parry Sound. More will be said about the extra precautions taken by the hospital after SARS appeared to be over, precautions which ensured that the unexpected SARS cases were screened immediately and put under precautions before they entered the emergency department, thus avoiding spread within the hospital. This interim report will deal with the systemic problems in the public health system demonstrated by the Parry Sound experience.

The hospital and the local public health unit faced major difficulties in their attempts to secure information on the actual SARS status of the patients who had been diagnosed with probable SARS or suspected SARS and transferred to Toronto for treatment. A hospital official noted:

> We had extreme difficulty in tracking patients and their status after they left. We still don't know officially whether they had probable SARS.

The hospital and the public health unit faced major difficulties in their attempts to get direction about the quarantine that appeared to be necessary because of the above-noted attendance at day care and school of the children of a suspect SARS case. On Saturday May 31, the senior hospital physicians and officials met all day. They had trouble getting in touch with the very newly designated interim Medical Office of Health who was busy with emergency patients in a hospital in another community abouc 80 kilometres away. They were unable to reach anyone in Toronto who could speak on behalf of the Chief Medical Officer of Health. The just-appointed interim Medical Officer of Health, when reached, was naturally reluctant to make any decision. It was initially suggested that officials in the local Parry Sound public health unit could make the decision, although in fact the decision to quarantine can only be made under the *Health Protection and Promotion Act* by the local Medical Officer of Health or the Chief Medical Officer of Health in Toronto. No one seemed to be in charge. The interim local Medical Officer of Health referred the local doctors to provincial officials in Toronto, and provincial officials in Toronto referred them back to the interim local Medical Officer of Health. The buck kept passing. The interim Medical Officer of Health tried to get in touch with the appropriate officials in Toronto. This indecision and confusion went on for a good part of the day. Eventually, the decision was made to quarantine but only after a decisive local physician made it clear that if no decision was forthcoming he felt himself bound to alert the media to the danger.[illegible] To this day the local people do not know how the decision came to be made.

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[156] West Parry Sound Health Centre and the Muskoka-Parry Sound Health Unit, *SARS – Impact in a Rural Community: Parry Sound's Experience*, November 2003.

It ascribes no criticism to anyone to say that the Parry Sound experience demonstrated serious systemic problems in Ontario's public health system. The first problem, the inability to get information about the SARS status of the patients diagnosed with probable SARS is part of the general lack of adequate information and communication systems, noted above.

The second problem, the confusion, indecision, and lack of transparency around the quarantine decision, demonstrates the weakness of a system of local public health control in a province where there are still, notwithstanding the Walkerton recommendations, eight Medical Officer of Health positions that have not been filled on a permanent basis. The Commission has also heard that there is a shortage of potential candidates with sufficient experience in infectious disease control and other public health disciplines.

There was in the Parry Sound situation no apparent machinery to support the newly appointed interim Medical Officer of Health; no sign of any mentoring system, no sign that there was anyone to turn to in a crisis for authoritative and experienced advice and assistance. This is no system for an emergency when decisions must be made quickly. It is fortunate, thanks to the judgment of a decisive local physician, that this dangerous gap in the system of public health protection did not lead to serious consequences.

[illegible] This quarantine decision has not been free from controversy. The Ontario Medical Association at the SARS Commission's Public Hearings suggested that "… the quarantine recommendation was made without adequate understanding of quarantine protocols. This led to the unnecessary quarantine of nearly 10 per cent of the town's population" (See *SARS Commission Public Hearings*, September 29, 2003, p. 51.) To the people at the ground on the time, struggling to contain what looked like a possible community outbreak, things looked much different than they do now to those who look at the decision with the benefit of hindsight. But everyone agrees that the Parry Sound situation was seriously hampered by the lack of a permanent local Medical Officer of Health.

The third problem is that the Muskoka-Parry Sound Public Health Unit, like many others in Ontario, did not have an adequate infectious disease team. Starting at the top, there was an interim temporary Medical Officer of Health who had been on the job less than a week. The position of epidemiologist, a vital function in outbreak management and infectious disease control, had been vacant since 1997. In 2000 the Board of Health agreed to fill the position but the Medical Officer of Health of the day did not think it was a priority. Attempts are now being made to secure approval to recruit an epidemiologist. A full communicable disease team would comprise, optimally, a Medical Officer of Health fully qualified in communicable disease, an epidemiologist, two or three communicable disease nurses, and two or three public health inspectors with communicable disease expertise. Far from a full team, the Muskoka-Parry Sound unit at the time of SARS had only 0.8 of the time of one communicable disease nurse.[100]

Part of the general problem in recruiting and retaining the necessary professionals is that salaries set by local boards are not always competitive. A public health inspector making $47,000 in a small Ontario unit can move to Alberta tomorrow and do the same work for $60,000. While it is commendable that Ontario hospitals are increasing their infection control capacity by hiring infection control nurses, it is regrettable that they are hiring some of them away from local public health units who cannot compete with the salaries set by hospitals. Balanced against the strengths of local control over public health administration, is this inherent weakness, that local salary differentials can make it very difficult to attract and retain the level of professional expertise required.

If the present system of local control over public health and infectious disease is to be maintained, it is essential that machinery be put in place to ensure continuous unbroken oversight and authority in every public health unit in Ontario supported by the necessary cadre of public health professionals.

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[100] Some progress is being made. The 0.8 nurse will go to full time on communicable disease. There are now two part time communicable disease nurses in Parry Sound, the equivalent of one full time person. There is now an acting communicable disease manager, which the Board will be asked to turn into a full time position, and there are three public health inspectors trained in communicable disease.

14. An Ontario Centre for Disease Control

A consensus has developed that some kind of separate "CDC Ontario" is needed, with strong academic links, in order to provide a critical mass of medical, public health, epidemiological, and laboratory capacity and expertise. Structural models abound for such an organization, from the B.C. CDC, to the Institut national de santé publique du Québec, to the federal model proposed in the Naylor Report, and even to the U.S. CDC itself. It is expected that the final Walker Report will make detailed and prescriptive recommendations for the structure and mandate of such an organization.

One thoughtful observer described the need for clear lines between the work of the agency and the work of the Public Health Branch:

> I would like to see an agency created as an intelligence service to public health, provincially and locally. There should be a clear lead for the Ministry on governance functions, and a clear lead for the agency on things like training, technology, knowledge transfer, advice on mandatory programme standards, and health human resource planning, the whole gamut of things that frankly those in the Ministry can't attend to. The agency would have a degree of administrative flexibility that you don't have in the civil service.

While it is beyond the scope of this interim report to address this issue in the detailed fashion expected from the final Walker Report, a few observations are in order.

First, the structure of the new agency or centre, which will combine advisory and operational functions, must reflect the appropriate balance between independence and accountability whether it is established as a Crown corporation or some other form of agency insulated from direct Ministerial control.

Second, it should be an adjunct to the work of the Chief Medical Officer of Health and the local Medical Officers of Health, not a competing body. SARS showed that there are already enough autonomous players on the block who can get in each other's way if not properly coordinated. There is always a danger in introducing a semi-autonomous body into a system like public health that is accountable to the public through the government. The risk is that such a body can take on a life of its own and an ivory tower agenda of its own that does not necessarily serve the public interest it was designed to support.

Third, it must be made clear from the beginning that the agency is not an end in itself but exists only to support public health. A useful summary of the appropriate role for such an agency is set out in the external review report of the B.C. Centre for Disease Control:

> The B.C. CDC exists to carry out provincial surveillance, both epidemiologic and laboratory based, to provide expert assistance to local public health professionals and to provide some specific disease control services i.e., for tuberculosis and sexually transmitted diseases. The UBC CDC was created to ensure that research and the development of knowledge was promoted to

> complement the service mandate of B.C. CDC. The only other similar organization in Canada is the Institut national de santé publique of the Province of Quebec. That organization is also responsible for provincial public health laboratory services, research, and expert support for public health practice in the province.[159]

To ensure that the new Ontario agency complements the service mandate of the public health system, the relationship must be clear between the new Ontario agency and the Chief Medical Officer of Health. Unless he or she has a clear say in the ongoing work and overall direction of the agency, and the ability to mobilize the resources of the agency to meet a public health problem when required, the agency will not fulfill its role as a source of support to public health operations. The Chief Medical Officer of Health must have more than a token role in the direction of any such agency. If the new agency is to have a Board of Directors, the Chief Medical Officer of Health, if not its Chair should be at least its Associate Chair. To the extent the agency is operational as opposed to purely advisory, the Chief Medical Officer of Health must, in the face of a public health problem, be able to direct the operational resources of the agency so as best to meet the problem at hand, whether the resources are epidemiological, laboratory, or other.

If the Chief Medical Officer of Health lacks the ability to mobilize the resources of the new centre, resources created to support the work of the Chief Medical Officer of Health and the local Medical Officers of Health, the danger exists that arose during SARS when the Science Committee and the Epi Unit were disconnected from the field operations. Whatever independence may be needed from government, whatever buffer required to ensure the academic and scientific integrity of the new agency, that independence and those buffers should not prevent the mobilization of its resources under the direction of the Chief Medical Officer of Health when required to meet a public health emergency.

For any public health agency to work, it must have authority with other sectors of the health care system and with the community as a whole. While some legislative authority will be necessary, the most important authority is what one local Medical Officer of Health described as "moral authority." Speaking of the role he considered the local medical officer of health to play in a community he stated:

> Now you talk about the authority of public health … I have never felt that I have great authority. On paper, legislatively I have great authority. I can order people to do all kinds of stuff and they can choose not to do it and I can go in front of a judge, as I have on a number of occasions, to have something done. But most of our public health authority comes from our credibility and willingness and ability to work with other people to get things done. It does not come from the Medical Officer of Health issuing orders … Our authority comes in terms of dealing with individuals so most of public health success does not come through authority, not legal authority but through moral authority if there is such a thing.

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[159] Report by Dr. Paul Gully and Dr. Thomas Marrie, October 30, 2003.

This will no doubt hold true for a Centre for Disease Control in Ontario. The success of centres such as the CDC in Atlanta and the CDC in British Columbia flows largely from a widespread recognition that these institutions house the very best of the best. The authority comes from their recognition as centres of excellence that can be counted on to work collaboratively with local agencies. To achieve this authority and success an Ontario Centre for Disease Control will require considerable resources and a strong commitment from government to maintain those resources. It will only work if it has the resources to attract recognized experts and to provide them with the best technology and equipment and optimal support to perform their work. It will take years to build a reputation for excellence and anything less than a 100-per-cent commitment to this long-term goal will surely result in failure.

15. Public Health Restructuring

Whenever a system proves wanting it is tempting to blame its problems on structure and to embark on a course of reorganization, or centralization, or regionalization, or decentralization. It must be remembered that organizational charts do not solve problems. The underlying problems of public health in Ontario have to do with a lack of resources, years of neglect, and lack of governmental priority. As noted above, these problems developed during the regimes of successive governments and no government or political party is immune from responsibility for the decline of public health protection. These problems will not be fixed by drawing boxes on paper around public health units and moving them into other boxes. The underlying problems will only be solved by a reversal of the neglect that has prevailed for so many years throughout the regime of so many different governments headed by all three political parties.

One Medical Officer of Health stressed the importance of fixing the problems of the system instead of simply reorganizing it:

> I think that if anyone is going to come in and think that they will suddenly make this a new system in Ontario and it is going to be functional, I would argue that it will not be. It will not be functional for a decade or more. It would take a great deal of time and effort to start doing those things at a local level and that time and effort would be far better spent in terms of not a reorganization or restructuring or complete revamping of public health in Ontario but focusing on whatever is a big problem, whether it be infectious disease in institutions or something else. Let us focus the effort on trying to fix whatever people think is wrong with that portion of that system rather than trying to restructure everything across the province.

That being said some attention must be given to the best way to structure and organize the delivery of public health in Ontario. Arguments are made to reduce the number of public health units from 37, on the basis that the smaller units cannot afford the critical mass of expertise required to deliver effective local protection against infectious disease. Those who advocate the reduction in the number of health units point to many difficulties including the inability or unwillingness of the present system to comply with the recommendations of the Walkerton Inquiry that each public health region be required to employ a full-time Medical Officer of Health. To date there are eight Medical Officer of Health positions that have not been filled on a permanent basis. This demonstrates the remarkable inability of the present system regional system, in the aftermath of a public health tragedy, to meet minimum standards. This inability to attract and retain the professional leadership it needs to protect the public shows that something is seriously wrong with the present regional system of local public health units.

The interim Walker report recommended that the existing number of public health units should be reviewed and, within two years, reduced from 37 units to 20 to 25 units.

Some question whether it is necessary to reduce the number of local units instead of providing the necessary critical mass of expertise to serve a number of individual units, on the argument that the problem is not the number of local units, but the lack of support and resources made available to the local units.

Is the problem simply the sheer number of local boards, or is it the functional inability of a local board to attract the critical mass of expertise necessary to manage public health programmes? Although it may be intuitively appealing to say that 37 is just too many, is there a way to preserve the value of a widespread local presence reflected in the present number of boards? Could a regional or centrally supportive structure be devised to give them access to the necessary critical mass of expertise and to consolidate control spans during a time of public health emergency?

No one who spoke to the Commission showed any appetite for a new regional structure, perhaps from fear of another layer of bureaucracy between the field and the Chief Medical Officer of Health. One Medical Officer of Health noted:

> History does not suggest that you need to have that regional level; I mean the concern of adding additional layers, the system is already decentralized enough.

While the last thing the public health system needs is another layer of bureaucracy, Ontario has had success over the years with non-bureaucratic structures of regional support including the Crown Attorney System, the Coroners' system, and the court system. One Medical Officer of Health noted the usefulness of an earlier system of regional Medical Officers of Health serving as a local resource.[160] Before closing the book on the options for public health reorganization, consideration should be given to the development of a non-bureaucratic, supportive, regional structure to provide assistance to the field and to consolidate the control span of the Chief Medical Officer of Health.

Another general observation about the restructuring process is that no matter how public health is restructured, it will continue to be delivered at the local level. The local Medical Officers of Health and the people on the ground under their direction are the backbone of the public health system. The point of service is the local public health unit. It would be shortsighted to focus unduly on reform of the central organisms like the Chief Medical Officer of Health and the Public Health Branch of the Ministry of Health and the new CDC Ontario (whatever it is called) at the expense of reforms and increased resources at the local level.

One Medical Officer of Health expressed this view very succinctly:

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[160] This Medical Officer of Health stated: "There used to be regional MOH's that worked for the province, at one point three or four of them and at some point up to about six of them. They were resourced to a local MOH. They were individuals who spent the bulk of their time going around the area that they were serving, finding out what was going on and they were a resource that you could go to, but over the years, those positions went. They had no authority but they were consultants, people who had additional information that you could go to and they were of value and of help, perhaps more in the outlying areas than in Toronto."

> I'm worried that the public health system at municipal level may not be reformed to extent it should be; I think it's being lost in the shuffle. The primary focus for change and reform seems to be at the provincial level. The backbone of the public health system is the local boards of health and they aren't getting not getting the proper focus or attention.

A similar concern was expressed by another Medical Officer of Health:

> Everything happens at the local level. The local level is the point of service. Funds must flow to this level. Public Health saves the province money. Health is a provincial responsibility so the province should fund strong local units. There is also opportunity for the Feds, and it would be far more cost-effective to have funding and results at the local level than many of Health Canada's current activities.

Whatever is done by way of structural revision, two adjustments are clearly needed to the role of the local Medical Officer of Health.

The first is to ensure, as noted above, that the local Medical Officer of Health enjoys the same degree of political independence from the local power structure that the Chief Medical Officer of Health enjoys from the province. Both the local Medical Officer of Health and the Chief Medical Officer of Health require the ability to speak out on public health issues without going through a political filter, and need to manage outbreaks free from politically motivated interference.

The second is to ensure that the local Medical Officer of Health is not buried in the municipal bureaucracy. It has been suggested that some local Medical Officers of Health, as municipalities moved to consolidate, have been sucked into the corporate municipal entity instead of retaining the executive authority over their own operations that is necessary to ensure their accountability for the administrative machinery that makes public health work on the ground. As the Association of Local Public Health Agencies noted in October 1997 during the hearings on Bill 152, which significantly amended *the Health Protection and Promotion Act*:

> … it is essential for the local Medical Officers of Health to retain statutory responsibility to serve as executive officer of the board of health. Of necessity, this must include responsibility for the management and administration of health programs and services and the related business affairs of the board, as well as responsibility for direction of employees and others whose services are engaged by the board.[161]

As a result of these concerns, the present Section 67 was added to the *Act* to provide that those engaged by a Board of Health to deliver public health programmes are subject to the direction of the local Medical Officer of Health who, in turn, is responsible to the local board for the management of those programmes. The problem is that some municipalities have accepted neither the spirit nor the letter of Section 67 and the province has demonstrated little appetite to take on a fight against those municipalities.

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[161] Association of Local Public Health Agencies, *Position Statement Regarding Bill 152, Schedule* (Toronto: October 9, 1997), pp. 1 - 2.

Some Medical Officers of Health suggest that Section 67 has not prevented the apprehended danger that public health administration would become lost within the municipal bureaucracies. One Medical Officer of Health described the current diminution in the authority of the local Medical Officer of Health over the administrative machinery that drives the delivery of public health protection:

> There is a sense that medical officers of health lost out after the downloading to the municipalities reflected in Bill 152 in 1997 effective January 1998 when the Medical Officer of Health lost their position as the executive officers of boards of health and the administrative and business function was taken from the Medical Officer of Health and given to municipal government. In some cases staff necessary to deliver public health programmes have, since then, been taken away from the Medical Officer of Health and assigned to other areas of municipal work.
>
> Boards of health and municipalities have taken great liberties as result of the powers and duties of the medical officer of health being watered down. If we change the funding of public health so it is far more driven by the province; makes sense to revisit those earlier decisions to give more power to municipalities over the Medical Officer of Health.

A Medical Officer of Health in one of Ontario's largest cities said:

> Most of us are lost deep down in municipal bureaucracies. This needs to be corrected. The Medical Officer of Health should be the Chief Executive Officer of a distinct service unit with accountability to a Board.

Because of the overall provincial interest in public health protection and because of the statutory obligations of the local Medical Officer of Health to ensure public health protection, the provisions of Section 67 should be enforced or if necessary amended to ensure that the Medical Officer of Health has direct administrative control over the personnel and administrative machinery required to deliver public health protection.

The big question, of course, is whether the present decentralized system should remain. Should public health in Ontario continue to be delivered and administered through local public health boards accountable in large part to local and regional municipal councils?

On the one hand, no other province in Canada has devolved so much public health responsibility to the municipal level. The Interim Walker Report noted that Ontario has the most widely dispersed and fragmented public health system in the country. In an age of emerging and reemerging infections diseases that can sweep across the world and across countries and provinces with no respect for boundaries, it is counter-intuitive to place a super-ordinate value on municipal autonomy in infectious disease prevention, surveillance, and outbreak management. Because infectious diseases can spread so rapidly and so widely, Ontario's protection against infectious disease is only as strong as the weakest local link.

On the other hand, many public health programmes such as chronic disease prevention and health promotion depend on local community partnerships with agencies, schools, nongovernmental organizations, and voluntary associations. There is a strong view that something of great value would be lost if local initiatives and local involvement in health promotion were destroyed through centralization of all public health functions under the province.

Ideally a structural balance can be struck which gives the province central control over infectious disease surveillance, prevention, and outbreak management, leaving with the municipalities some room to participate in those programmes, together with a significant financial and operational role in community-based health promotion.

16. Greater Priority for Infectious Disease Control

There is an inherent tension between two kinds of public health work. While different terminology is used from time to time the two kinds of work are sometimes broadly characterized as infectious disease protection on the one hand and health promotion or population health on the other hand.

Infectious disease protection includes safe food, safe water, infection control in hospitals, day care centers and long-term care facilities, rabies control, safe water, sexually transmitted diseases, tuberculosis control, and vaccine preventable diseases. This work includes risk assessment, surveillance, case-finding, contact tracing, immunization, and infection control. It also deals with emergency response, investigation and control during outbreaks including investigation and control.

Health promotion includes programmes to prevent chronic disease and to encourage healthy eating, tobacco reduction, physical fitness, early cancer detection, prevention of injury and substance abuse, family health, sexual health, breastfeeding and other aspects of child and family life.

Infectious disease protection aims at immediate threats to public health like SARS and influenza while health promotion and population health aims at less immediate threats which make up the largest burden of disease in the community, including chronic lifestyle diseases. The work in infectious disease protection is conducted largely within the public health and health care system while the work in health promotion and population health is conducted largely through community partnerships with schools, non-governmental organizations, and the volunteer sector. One thoughtful observer suggested this was a crucial difference between infection control and health promotion, and that infection control requires more public health leadership and resources because, unlike health promotion, infection control lacks the community based allies and partners available to health promotion programmes.

The original mission of public health, historically, had mainly to do with protection against infectious disease. In the 19th century, protection from infectious disease – then a major cause of death – was the main focus of public health in Ontario. The earliest public health legislation was an Act passed in 1833 by the Legislature of Upper Canada,

> … to establish Boards of Health to guard against the introduction of malignant, contagious and infectious diseases in this province.[162]

Vaccines, sanitation, medical improvements and antibiotics reduced the burden of infectious disease, shifting patterns of morbidity and mortality from diseases like diphtheria to diseases like coronary heart disease. As infectious diseases receded in importance as a cause of death in the 20th century, public health expanded into many other program areas, especially in the fields of chronic disease and injury.

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[162] Association of Local Public Health Agencies, *Orientation and Reference Manual* (Toronto: 2004), p.1.

The shift in public health priorities to long-term population health promotion, coupled with the general decline in public and governmental attention to infectious disease control,[163] has led to the point where our public health system is not well equipped to deal with significant outbreaks of a new communicable disease. As noted in the Naylor Report:

> As we have seen with SARS, questions now exist as to whether the Canadian public health system is minimally equipped and organized to deal with even a modest-sized outbreak of a new communicable disease.[164]

The inadequate priority for infectious disease protection has been reflected in a number of ways.

Toronto Public Health, for example, may have been the largest public health unit in the country, but it lacked sufficient infectious diseases control resources and capabilities. For example, prior to SARS, it was not meeting provincial minimum mandatory requirements for control of infectious diseases and infection control for institutions. This meant that it did not have strong representation on every hospital infection control committee in Toronto.

Toronto Public Health was not alone.

As noted above, the infection control capacity of Muskoka-Parry Sound Health Unit before SARS consisted of the equivalent of less than one full-time infection control nurse. The unit also lacked public health inspectors trained in infectious disease control and there was a long-standing vacancy for an epidemiologist. And, when SARS II struck, it had a freshly appointed acting Medical Officer of Health.

On the eve of the SARS outbreak, many health units were in the same position of not having a qualified medical officer of health. As the Provincial Auditor stated in his 2003 report:

> According to the Ministry, there is a national shortage of physicians with community medicine training to fill vacancies, and as of January 2003, there were eight boards of health without the mandated full-time medical officer of health. While there were individuals acting in the medical-officer-of-health position, according to the Ministry they may not have had all of the required qualifications for the position. At five boards, acting medical officers of health had occupied the position for over three years.[165]

None of the mandatory guidelines was accompanied by effective compliance monitoring. As a result, there was inadequate provincial oversight to ensure that the public health system was capable of combating an outbreak. In effect, local health units were told what infectious diseases programs they were required to have, but no one checked to ensure they were actually implementing them – or had sufficient funding to do so.

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[163] See the section on "The Decline of Public Health."

[164] Naylor Report, p. 45.

[165] Provincial Auditor, *Annual Report – 2003*, (Toronto: December 2, 2003), p. 225.

When Part One of the Walkerton Report was released in January 2002 – incidentally, more than a year before the SARS outbreak – it recommended that the Ministry of Health and Long-Term Care verify compliance with the mandatory guidelines through regular assessments and that it,

> … annually track trends in non-compliance in order to assess whether changes are required to the mandatory programs and whether resources require adjustments to ensure full compliance.[166]

However, as the Provincial Auditor noted in his 2003 report,

> Ministry staff informed us that, since 1998, only one assessment of a local health unit had been undertaken and that in March 2003, the Ministry began limited assessments of mandatory program areas at five local health units.[167]

The Commission has been informed that the Public Health Branch has begun to conduct audits of public health units.

A further example of the lack of priority given to infectious disease control by the provincial Public Health Branch is in the area of TB surveillance, where the Provincial Auditor raised some concerns in his 1997 report. However, these issues had not been fully addressed by the time of his 2003 report. The Provincial Auditor's 2003 report provides a useful snapshot of the situation in public health infection control in the days leading up to SARS – since it was based on an audit that was mostly completed before SARS.[168] On the continuing inadequacy of TB surveillance, the Provincial Auditor stated:

> In our *1997 Annual Report*, we recommended that the Ministry should improve its ability to track individuals under surveillance for inactive TB. At that time we noted that the Public Health Branch had indicated that approximately 35 per cent of the individuals who were required to undergo medical surveillance for inactive TB by boards of health, including notifying the appropriate authorities of address changes, could not be followed up on

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[166] Provincial Auditor, *Annual Report – 2003*, (Toronto: December 2, 2003), p. 223.

[167] Provincial Auditor, *Annual Report – 2003*, (Toronto: December 2, 2003), p. 223.

[168] See page 218 of the 2003 report by the Provincial Auditor which stated: "Our audit, which was substantially completed in March 2003, was conducted in accordance with the standards for assurance engagements, encompassing value for money and compliance, established by the Canadian Institute of Chartered Accountants and accordingly included such tests and other procedures as we considered necessary in the circumstances. The criteria used to conclude on our audit objectives were discussed with and agreed to by ministry management and related to systems, policies, and procedures that the Ministry should have in place. Towards the end of our audit, the Ministry and health service providers were coping with an outbreak of Severe Acute Respiratory Syndrome (SARS). Since our audit fieldwork was substantially completed before this outbreak occurred, our audit did not include work in this area."

> due to missing or incorrect information such as a wrong address provided. Ministry staff also indicated at that time that Public Health Branch staff may be able to use OHIP's Registered Persons Data Base to obtain the necessary information.
>
> Information reported by local health units to the Ministry for the 2001 year indicated that only 65 per cent of referred individuals were successfully contacted and managed by local health units in accordance with the Ministry's Tuberculosis Control Protocol. We were advised that local health units were required to inform the Ministry of those individuals who could not be contacted. However, the Ministry had not determined whether local health units were fully complying with this requirement. Procedures had also not been implemented to utilize the Ontario Health Insurance Program's (OHIP's) Registered Persons Data Base to attempt to locate individuals who had not reported to a local health unit or had not undergone a physical examination and x-ray.
>
> To help reduce the incidence of active tuberculosis, the Ministry should enhance the effectiveness of medical surveillance by:
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> - ensuring that local health units consistently and appropriately complete the medical surveillance of individuals with inactive tuberculosis, including ensuring that they have undergone a physical examination and x-ray; and
> - using all available sources of information, including the Ontario Health Insurance Program's Registered Persons Data Base, to track those individuals under medical surveillance who were not successfully contacted and managed by local health units.[169]

This tuberculosis example presents as a symptom of the inadequate priority given to protection against infectious disease.

SARS made it clear that our public health system must give greater priority to protection against infectious disease. It is equally clear, however, that our entire public health system cannot be reorganized around one disease like SARS. Many diseases produce more sickness and mortality than SARS, and the task of plugging the holes demonstrated by SARS cannot be permitted to detract public health from the task of preventing those afflictions that comprise a higher burden of disease than SARS and other infectious diseases.

As one local Medical Officer of Health noted:

> The concern would be [if] infection control gets funded 100 per cent because it is somehow more important than a variety of other things that public

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[169] Provincial Auditor, *Annual Report – 2003*, (Toronto: December 2, 2003), pp. 232-3.

> health gets involved with and so I think there would be others that would argue and perhaps myself that there are going to be more people that are going to be adversely affected by our rising epidemic [of] obesity and lack of activities and all of those things and yet it is infection control and the cases of SARS that has taken the spotlight, it is West Nile has taken the spotlight; … two men die from West Nile and all of a sudden you have a coroner's inquest. One hundred women die annually of cervical cancer in this province which is suppose to be a completely preventable cause of death and yet no one seems to want to do anything about them.

Another Medical Officer of Health pointed out the greatest burden of disease in the community is no longer communicable disease and that chronic lifestyle diseases pose a greater long-term threat to the health of the community:

> I just want to come back to a few things about diseases that public health does. I do not think that anyone has suggested that the response to SARS should be the enhancement of programs for obesity control for example but aLPHA is making a point that in the same way that community disease control in public health has been neglected in the last few years and it is not the only area. There are other areas which are in need and may in the long run lead to problems. Public health has always been about trying to prevent what is mostly causing people to become ill and die in society. In the late 19th century that was mostly communicable disease so public health had its roots there. If you look at the top 10 causes of death in Ontario in 1880, half of them were communicable diseases. If you look at top 10 causes of death in Ontario today, there is only one communicable disease on the list and that is pneumonia and is down on the list and usually taking elderly people who are sick with heart disease. So the picture of health has changed dramatically and so our programs have changed. If you are trying to prevent a death and whether it is a death from a heart attack or from SARS, the technology to do that is different. In the case of a heart attack we do not have a vaccine for that but we do have preventative intervention and some of which is educational. It is all about trying to change what a 10-year-old kid eats for lunch and then changes what he eats when he is 40 years old and then 50-60 and what his pattern of activity is and we know if we change those things, then we will have one less heart attack or one hundred less in a thousand. So those are the interventions that we have early in life now that are comparable to vaccines or hand washing for communicable diseases

The importance of health promotion and the fight against chronic diseases is directly relevant to the ability of a population to withstand the onslaught of infectious disease. One Medical Officer of Health thoughtfully brought this home in the context of SARS:

> If we put all our resources into communicable diseases then other kinds of disease prevention can suffer from lack of investment. Look who was at highest risk from SARS, they tended to be people with chronic disease, diabetes and other chronic diseases. It is shortsighted to put all our eggs into

> preventing this afternoon's problems when tomorrow's problems will become to-day's.

While it would be wrong to downgrade the long-term importance of health promotion and population health, the immediate threat posed by any infectious outbreak requires that a dominant priority must be given to protecting the public against infectious disease. It does not disrespect the advocates of health promotion to say that the immediate demands of public safety require that public health, as its first priority, looks after its core business of protecting us from infectious disease.

As noted in the Naylor Report there is little disagreement that:

> … public health has essential roles in areas such as health protection (food and water safety), disease surveillance, and outbreak management, and these functions must be given priority.[170]

As one member of the Science Committee put it, quoted below in a different context:

> … I maintain that of all the public health things we can do, if we don't control infectious diseases there's no point to going after cancer, cardiovascular disease, well babies and all of those things.

The tension in public health, between priority for infectious disease control and priority for long-term population health promotion, including the prevention of chronic lifestyle diseases, is not going to go away. There is no point in arguing which is more important, because they are both important. There are however five basic reasons why protection against infectious disease should be the first basic priority of our public health system.

The first is that the threat from infectious disease is direct and immediate. The second is that an outbreak of infectious disease, if not controlled, can bring the province to its knees within days or weeks, a threat not posed by lifestyle diseases. The third is that infectious disease catches the direct attention and immediate concern of the public in a way that long-term health promotion does not. It is essential in an infectious disease outbreak that the public be satisfied that they are getting solid information from the government and that everything possible is being done to contain the disease. The fourth is that infectious disease prevention requires an immediate overall response because it moves rapidly on the ground and spreads quickly from one municipality to another and from province to province and country to country, thus engaging an international interest. The fifth is that health promotion depends largely on partnerships outside the health system between public health and local community agencies like schools and advocacy groups, allies and resources not available to infectious disease control which must stand largely on its own.

For these five reasons safe water, safe food, and protection against infectious disease should be the first priorities of Ontario's public health system.

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[170] Naylor Report, p. 19

17. Central Control over Health Protection

An uncontrolled outbreak of infectious disease could bring the province to its knees. The province-wide consequences of a failure in infectious disease control are simply too great for the province to delegate infectious disease protection to the municipal level without effective measures of central provincial control. There is little machinery for direct central control over infectious disease programmes. The existing machinery to enforce local compliance with provincial standards is cumbersome and underused. Better machinery is needed to ensure provincial control over infectious disease surveillance and control.

The present distribution of legal powers under the *Health Promotion and Protection Act* gives the local Medical Officer of Health an enormous ambit of uncontrolled personal discretion, which is not ordinarily subject to the review, or influence of the Chief Medical Officer of Health. The Chief Medical Officer of Health does have some override powers, and cumbersome machinery does exist under which the province might ultimately bring to heel a rogue board of health. But public health authority in Ontario over infectious disease control, including outbreak management, is primarily that of local officials with no direct accountability to any central authority.

There is no clear accountability to any central provincial authority for local public health decisions to quarantine thousands of people locally. There is no clear accountability to any central authority for local decisions not to quarantine, decisions that could lead to epidemic community outbreak of a deadly disease. This lack of clear central authority could require the Chief Medical Officer of Health, during a virulent outbreak like SARS, to negotiate with separate local Medical Officers of Health whether particular cases should be reported as SARS to the international community and whether or not the quarantine power should be invoked. This lack of central authority could lead to gross and irrational inequality in the application of the quarantine powers throughout the province if different local Medical Officers of Health exercised their individual authority without regard to any consistent central guidance.

During a disease outbreak the international community and organizations like the World Health Organization look for reassurance and credibility to the national and provincial level, not to the particular strength of any local public health board or the particular credibility of any local Medical Officer of Health. Viruses do not respect boundaries between municipal health units. The chain of provincial protection against the spread of infectious disease is only as strong as the weakest link in the 37 local public health units. A failure in one public health unit can spill into other public health units and impact the entire province and ultimately the entire country and the international community. When dealing with a traveling virus, concerns about local autonomy must yield to the need for effective central control.

Although some local Medical Officers of Health treasure their local autonomy from the province and from the Chief Medical Officer of Health, even in relation to outbreak control, there is a degree of recognition that clear and consistent central provincial authority is required for effective protection against infectious disease.

Dr. William Schabas, a former Chief Medical Officer of Health, noted at the public hearings:

> I think we need clearer lines of authority within our public health system. At the moment, local public health authorities are not directly answerable or reportable to the provincial authority and I think, particularly in a crisis like SARS, that's something that's important.[171]

The lack of clarity around the respective accountability of the Chief Medical Officer of Health and the local Medical Officer of Health is striking. To quote a former Medical Officer of Health:

> Q: I am unclear as to what effective powers the Chief Medical Officer of Health has in general terms over the system of protection against infectious disease.
>
> A: Well it is hugely unclear, is it not? … Certainly clarifying the accountability would be a benefit whether the people like the outcome or not because right now it is very vague

Another Medical Officer of Health commented on the inconsistent relationship between the Chief Medical Officer of Health and the local Medical Officer of Health:

> … the relationship between the local Medical Officer of Health and Chief Medical Officer of Health is not formalized. At times, the Chief Medical Officer of Health can be a mentor and adviser, at other time he or she serves an appellate court function (e.g., HPPA s. 22.1). In dealing with perspectives related to one person in one position, it is also important to acknowledge that personality traits will also influence these informal relationships. At times, incumbent Chief Medical Officers of Health have acted as if a master-servant relationship existed, where none is defined by law or policy. At most other times, the perspective of the province is that public health is delivered through independent boards, with all accountability for decisions a local matter, and an unwillingness to advocate for or support the local Medical Officers of Health. Recommendations in this area would be largely determined by the directions the province chooses to follow with respect to governance, funding and structure.

Another experienced Medical Officer of Health, while favouring a continuing element of local control, agreed that clearer lines of authority were necessary:

> I think the first issue is whether Ontario wants to continue to have a decentralized system for public health and decentralized governance under local Boards of Health. If yes, when exceptions would apply in a health emergency, whether infectious or non-infectious. I do think that is a mutual

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[171] *SARS Commission Public Hearings*, September 30, 2003, p. 28.

> benefit in maintaining some devolution of control to the local level for day today responsibilities including day-to-day management of infection control and local outbreaks. It would be totally overwhelming for the province to be responsible for and give direction on the huge weight of disease issues that come up every day. But the roles and responsibilities and terms of engagement that need to take effect in a multi jurisdictional situation, an outbreak in a number of local units, needs to be much clearer. One of the outcomes from our collective experiences during SARS is that those roles and relationships need to be more clearly defined …
>
> The province will have to revisit both the current framework and the existing mandatory programmes to make the surveillance process stronger and less ambiguous. It is no good at the end of the day to point fingers at each other and say "I thought you were supposed to be doing it" The public has no tolerance for it, and neither do those who work in the system.

Another experienced Medical Officer of Health, no friend of central authority for its own sake, recognized its need in respect of communicable disease control:

> I think it has been more recognized because of the widespread nature of the impact of SARS that there is a provincial interest in having an effective public health system … [W]e do not have in real terms a health care system because of the variety of components that work or do not work together effectively. But the public health system is loosely connected because it is decentralized and is probably appropriate for many different kinds of public health programs that you need to customize to the local needs. But communicable disease control is increasingly being recognized as something necessary across the province and the system needs to work together where communicable disease crosses [local boundaries].

Another Medical Officer of Health, while advocating local public health autonomy in a general sense, recognized in thoughtful terms that infectious disease control requires a stronger element of central provincial control:

> I think that communicable disease is one of the areas where local control is a bit less important in my estimation, where consistency is more important. But I would hate to have the entire template for public health set based on that example because local control is more important with many of the other things that we deal with, where you are trying to change community values such as around tobacco, changing the way that the community thinks about health issues, thinks about behaviours which have an impact on health. It is much more important to work locally and they do that very differently in Kenora than in Toronto. But communicable disease control in a hospital in Kenora and Toronto is not as different as it is with these other programmes. I make a plea that local control is very important particularly for other programmes …

> Clearly infectious disease really requires some kind of consistent application. I would rather have the central organization send out whatever [directives] are necessary even if the are wrong, in one sense, because they could then correct it as they learn more. Whereas if each of the Medical Officer of Health were developing our own procedures and protocols, some of us may be right and others may be wrong and the confusion that would come from that would be far worse than having the central group be wrong and then correct it all around the province the next day or the day after. So I think related to communicable disease control, consistency is important. So clearly the provincial organization that can collect data on a larger number of cases should be in a much better position to come up with important ways of dealing with that particular kind of infection and should be able to distribute that out to the field in some linked and logical and coordinated kind of way to ensure at the local level that those things are being carried out.

In theory, mechanisms do exist for the province to assert control over a local health unit that is not delivering adequate public health protection. One Medical Officer of Health was asked about this issue:

> Q: What if the local board does not allocate enough money to maintain the necessary level of public health protection?
>
> A: Then you move to the assessment and compliance machinery in the HPPA.

The difficulty is that the assessment and compliance machinery is infinitely complicated, replete with notices, directions, orders, procedures before the Health Services Appeal and Review Board and the Superior Court of Justice and appeals therefrom. It more resembles an international peacekeeping operation than it resembles effective machinery to enforce basic health protection standards across the province. And there is a further question of political will. One Medical Officer of Health asked the question:

> As long as public health is entangled in two different levels of government it becomes more difficult to find the political will to improve public health. If the provincial government wants to make a deal with a municipality on transport funding, and needs the goodwill of the municipality, will the government encourage the Minister of Health to crack down on the municipality if it isn't up to standard on public health protection?

Under the present *Act*, the legal and practical backbone of local disease control is the local Medical Officer of Health. It makes sense that the initial responsibility should be local. But that initial arrangement makes no sense unless it can be influenced by provincial leadership and can shift, instantly, to the provincial level when a threatened or actual outbreak imperils the provincial public interest.

There are two basic ways to ensure the appropriate measure of central accountability and authority for infectious disease protection.

The first way is to leave essential public health legal powers in the initial hands of the local Medical Officer of Health, subject to some machinery to displace those powers to the Chief Medical Officer of Health during a designated provincial public health outbreak. Although this system maximizes the ordinary local autonomy of local Medical Officers of Health, municipal autonomy is hardly a value of super ordinate importance when dealing with viruses that cross municipal, provincial, federal, national, and international boundaries. And the complicated legal machinery necessary to trigger the imposition of central powers, unless made infinitely more simple than the almost medieval system for provincial override of local public health boards, would deprive the provincial override of any practical value in a public health threat.

The second way is to place essential public health legal powers in the hands of the Chief Medical Officer of Health, those powers to be exercised on a day-to-day basis by the local Medical Officer of Health, subject to the ultimate direction of the Chief Medical Officer of Health. This retains all the public health powers under the *Act* within the presumptive local authority of the local Medical Officer of Health. But it leaves a clear role for provincial leadership and it provides a safeguard and an immediate change of the default position, whenever required, to central provincial authority. This kind of arrangement works well in the justice system where the local Crown Attorney is the agent of the Attorney General, and where the regional senior judge exercises in their region the powers of the Chief Justice, subject to the direction of the Chief Justice.

If the *Health Protection and Promotion Act* were amended to provide that:

- The powers now assigned by law to the Medical Officer of Health are reassigned to the Chief Medical Officer of Health, and

- The powers reassigned to the Chief Medical Officer of Health shall be exercised by the Medical Officer of Health in the local region, subject to the direction of the Chief Medical Officer of Health,

it would leave the local Medical Officers of Health a clear field to exercise the same powers they have always exercised, subject to ultimate central direction.

Under the old system, such a re-arrangement of powers might raise serious concerns of loss of autonomy on the part of the local Medical Officer of Health including the spectre of political influence from Queen's Park on local public health decisions. While concerns about local autonomy will never go away in any centralized system, the new independence of the Chief Medical Officer of Health and the Medical Officer of Health should go a long way to allay such concerns.

A further sensible measure to allay these concerns, and to further protect against the perception of political interference with public health decisions, would be to remove from the Minister of Health under the *Act* the direct operational power in cases of health risk, such powers to be assigned to the Chief Medical Officer of Health.

These measures are proposed to strengthen provincial control over public health protection with adequate safeguards to ensure the political independence of the Chief Medical Officer of Health and the local Medical Officer of Health in relation to infectious disease control.

Without stronger measures to ensure central provincial control of infectious disease control whenever necessary, Ontario will be left with inadequate protection against potential public health disasters.

18. Twenty-one Principles for Reform

The lessons of SARS yield 21 principles for public health reform:

1. Public health in Ontario requires a new mandate, new leadership, and new resources.

2. Ontario public health requires renewal according to the principles recommended in the Naylor, Kirby, and interim Walker reports.

3. Protection against infectious disease[172] requires central province-wide accountability, direction, and control.

4. Safe water, safe food, and protection against infectious disease should be the first priorities of Ontario's public health system.

5. Emergency planning and preparedness are required, along with public health infrastructure improvements, to protect against the next outbreak of infectious disease.

6. Local Medical Officers of Health and Public Health Units, the backbone of Ontario public health, require in any reform process a strong focus of attention, support, consultation and resources.

7. Reviews are necessary to determine if municipalities should have a significant role in public health protection, or whether accountability, authority, and funding should be fully uploaded to the province.

8. If local Boards of Health are retained, the province should streamline the processes of provincial leadership and direction to ensure that local boards comply with the full programme requirements established by the province for infectious disease protection.

9. So long as the local boards of health remain in place: The local Medical Officer of Health should have full chief executive officer authority for local public health services and be accountable to the local Board. Section 67 of the *Health Protection and Promotion Act* should be enforced, if necessary amended, to ensure that personnel and machinery required to deliver public health protection are not buried in the municipal bureaucracy.

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[172] Basic infectious disease programmes include protection against infectious disease, surveillance for early recognition of infectious outbreaks, food safety, water safety, infection control in hospitals, day care centres and long-term care facilities, rabies control, sexually transmitted diseases including HIV/AIDS, tuberculosis control, and vaccine preventable diseases.

10. Public health protection funding against infectious disease should be uploaded so that the province pays at least 75 per cent and local municipalities pay 25 per cent or less.

11. A transparent system authorized by law should be used to clarify and regularize the roles of Chief Medical Officer of Health and the local Medical Officer of Health in deciding whether a particular case should be designated a reportable disease.

12. The Chief Medical Officer of Health, while accountable to the Minister of Health, requires the independent duty and authority to communicate directly with the public and the Legislative Assembly whenever he or she deems necessary.

13. The Minister of Health should assign his or her operational powers under the *Health Protection and Promotion Act* to the Chief Medical Officer of Health.

14. The Chief Medical Officer of Health should have operational independence from government in respect of public health decisions during an infectious disease outbreak. Such independence should be supported by a transparent system requiring that any Ministerial recommendations be in writing and publicly available.

15. The local Medical Officer of Health requires independence, matching that of the Chief Medical Officer of Health, to speak out and to manage infectious outbreaks.

16. Operational powers of the local Medical Officer of Health should be reassigned to the Chief Medical Officer of Health, to be exercised locally by the Medical Officer of Health subject to the direction of the Chief Medical Officer of Health.

17. An Ontario Centre for Disease Control should be created as support for the Chief Medical Officer of Health and independent of the Medical Officer of Health. It should have a critical mass of public health expertise, strong academic links, and central laboratory capacity.

18. Public health requires strong links with hospitals and other health care facilities and establishes, where necessary, an authoritative hospital presence in relation to nosocomial infection. Respective accountability and roles and responsibilities of public health care and health care institutions in respect of infectious outbreaks should be clarified.

19. Ontario and Canada must avoid bickering and must create strong public health links based on cooperation rather than competition to avoid the pitfalls of federal overreaching and provincial distrust.

20. The Ontario government must commit itself to provide the necessary resources and leadership for effective public health protection against infectious disease.

21. Public health requires strong links with nurses, doctor and other health care workers and their unions and professional organizations.

It is expected that the final report of the Walker expert panel will recommend a detailed prescriptive blueprint for many of the operational details of a renewed system. Such operational details are beyond the scope of this interim report. Some of the issues that will drive these details are discussed above.

19. Political Will

A reformed public health system requires a major injection of resources. The Naylor, Kirby, and interim Walker reports analyzed the need for a critical mass of scientific and medical expertise, more capacity to educate, recruit, and retain public health professionals, increased laboratory capacity, and improved technology. Further recommendations are expected in the final Walker report. Significant financial resources will be needed to give Ontario's public health system any reasonable capacity for protection against infectious disease.

The decline of public health protection in Ontario reflects a consistent lack of political will, over the regime of many successive governments and all three political parties, to bring up to a reasonable standard the systems that protect us against infectious disease.

Competition for tax dollars is fierce. It is not easy in a time of fiscal constraint for any government to make additional funds available for any public programme. It will require significant political will on the part of the Minister of Health and the Ontario government to commit the funds and the long-term resolve that are required to bring our public health protection against infectious disease up to a reasonable standard.

It would be very easy, now that the SARS outbreak is over, to put public health reform on the back burner. It is a general habit of governments to respond to a crisis by making a few improvements without fixing the underlying problems responsible for the crisis. It would be a tragedy if that turned out to be the case with SARS. As the Naylor Report pointed out:

> SARS is simply the latest in a series of recent bellwethers for the fragile state of Canada's … public health systems. The pattern is now familiar. Public health is taken for granted until disease outbreaks occur, whereupon a brief flurry of lip service leads to minimal investments and little real change in public health infrastructure or priorities. This cycle must end.[173]

Ontario, as demonstrated in this interim report, slept through many wake-up calls. Again and again the systemic flaws were pointed out, again and again the very problems that emerged during SARS were predicted, again and again the warnings were ignored.

The Ontario government has a clear choice. If it has the necessary political will, it can make the financial investment and the long-term commitment to reform that is required to bring our public health protection against infectious disease up to a reasonable standard. If it lacks the necessary political will, it can tinker with the system, make a token investment, and then wait for the death, sickness, suffering and economic disaster that will come with the next outbreak of disease.

The strength of the government's political will can be measured in the months ahead by its actions and its long-term commitments.

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[173] Naylor Report, p. 64.

APPENDIX A: THE COMMISSION'S ONGOING WORK

The Commission was appointed by order in council dated June 10, 2003. Although some preliminary interviews were conducted in June and July[174] the work did not get fully underway until August after premises were secured and a small core of staff had been retained.

This preliminary report is based upon the public health aspects of the SARS crisis that have emerged from the evidence obtained during the course of investigation until now.

The Commission continues to investigate in order to tell the public the story of SARS, what happened, what went right, what went wrong, and what lessons emerge from the entire experience. The specific terms of reference, to be addressed in the final report, are set out in Appendix B. These issues include, among others, health worker protection, occupational health and safety in hospitals and emergency response. Many who contracted SARS and who lost family members to SARS have spoken to the Commission with particular concerns which will be addressed in the final report.

Most of the Commission's investigation takes place through confidential interviews. Over 300 people have provided information on the condition that their names will not be used in the report and that their disclosure to the Commission is confidential and not subject to private or public access. A few people have been interviewed without such guarantees and they may be quoted in the report.

The Commission is grateful to those who have come forward to provide information and in particular to the many who suffered from SARS and lost family members to SARS, who shared their stories despite the pain of reliving their suffering and loss. The Commission will speak to more SARS victims in the months ahead including those who lost loved ones to SARS.

The Commission will continue to conduct interviews in the months to come. Anyone who wishes to speak to the Commission or provide information to the Commission should contact Commission Counsel, Mr. Douglas Hunt, Q.C., (416-212-6868) or Assistant Commission Counsel, Ms. Jennifer Crawford (416-212-6867).

In addition to the private interviews, the Commission held six days of pubic hearings. The first round of public hearings were held on September 29, 30 and October 1 at the St. Lawrence Market (North Market) in Toronto. The second round of hearings were held on November 17, 18 and 19, at the St. Lawrence Hall, in Toronto. The hearings were preceded by newspaper and radio advertisements, set out in Appendix D. Everyone who asked to present to the Commission was given an opportunity to be heard. Over one hundred people spoke to the Commission during these six days of public hearings.

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[174] During June and into July the health care system was still dealing with SARS patients and public health authorities were still dealing with SARS issues. It was required by the terms of reference, and by common sense, that the investigation be conducted in a manner that does not impede ongoing efforts to isolate and contain SARS.

Transcripts of the presentations, along with some of the power point presentations and written submissions provided to the Commission by presenters during the public hearings, are available for public viewing at the Commission web site: www.sarscommission.ca.

There is no deadline for the completion and submission of the final report. The Commission's present intention is to have the final report in the hands of the Minister late this year or early next year. The work will continue until the Commissioner is satisfied that all necessary evidence has been reviewed and that the terms of reference have been fulfilled.

For further information or future updates on the work of the Commission, please visit our web site at www.sarscommission.ca.

APPENDIX B: ORDER IN COUNCIL

Ontario
Executive Council
Conseil exécutif

On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and concurrence of the Executive Council, orders that:

Sur la recommandation de la personne soussignée, le lieutenant-gouverneur, sur l'avis et avec le consentement du Conseil exécutif, décrète ce qui suit:

WHEREAS the Minister of Health and Long-Term Care has appointed the Honourable Mr. Justice Archie G. Campbell to investigate the recent introduction and spread of Severe Acute Respiratory Syndrome ("SARS") pursuant to section 78 of the *Health Protection and Promotion Act*;

WHEREAS the Minister of Health and Long-Term Care has provided Mr. Justice Campbell terms of reference for the investigation in a letter dated June 10, 2003;

WHEREAS persons who disclose information to Justice Campbell in the course of his investigation will be protected from any adverse employment action;

AND WHEREAS it is desirable to support Mr. Justice Campbell's investigation and to mandate full co-operation with him by all Government ministries, boards, agencies and commissions:

ALL Government Ministries, Boards, Agencies and Commissions, and their employees, shall assist Mr. Justice Campbell to the fullest extent in order that he may carry out his investigation;

ALL Government Ministries, Boards, Agencies and Commissions shall respect the independence of the investigation;

THE Attorney General shall furnish Mr. Justice Campbell with the resources and support referred to in paragraph 7 of the terms of reference for the investigation.

Recommended: ____________________
Minister of Health and
Long-Term Care

Concurred: ____________________
Chair of Cabinet

Approved and Ordered: June 10, 2003
Date

____
Lieutenant-Governor

O.C./Décret 1230/2003

APPENDIX C: LETTER OF APPOINTMENT

Ministry of Health
and Long-Term Care

Office of the Minister
10th Floor, Hepburn Block
80 Grosvenor Street
Toronto, ON M7A 2C4
Tel: 416-327-4300
Fax: 416-326-1571
www.gov.on.ca/health

June 10, 2003

The Honourable Mr. Justice Archie G. Campbell
130 Queen Street West
Toronto, ON M5H 2N5

Dear Mr. Justice Campbell:

This letter will confirm your appointment as an independent Investigator, pursuant to section 78 of the *Health Protection and Promotion Act*, to investigate the recent introduction and spread of Severe Acute Respiratory Syndrome (SARS). I would like to express my thanks for your valuable input into the development of the Terms of Reference for this inquiry, a copy of which is appended hereto.

As you are aware, persons who disclose information to you in the course of your investigation will be protected from any adverse employment action, pursuant to Section 9.1(1) of the *Public Inquiries Act*.

As indicated in the Terms of Reference, you will deliver your reports to me and I will release them to the public. You will receive resources and support staff through the Ministry of the Attorney General, pursuant to paragraph 7 of the Terms of Reference.

In accordance with the attached Order in Council, all Government ministries, agencies, boards and commissions and their employees have been directed to co-operate with your investigation and to respect its independence.

On behalf of the Government and the people of Ontario, I thank you for agreeing to accept this most important mandate.

Yours very truly,

Tony Clement
Minister

APPENDIX D: TERMS OF REFERENCE

Independent SARS Commission
Terms of Reference

1. The subject matter of the investigation shall be:

   (a) how the SARS virus was introduced here and what measures, if any, could have been taken at points of entry to prevent its introduction;

   (b) how the SARS virus spread;

   (c) the extent to which information related to SARS was communicated among health care workers and institutions involved in dealing with the disease;

   (d) whether health care workers and patients in health care treatment facilities and long-term care facilities were adequately protected from exposure to SARS, having regard for the knowledge and information available at the time;

   (e) the extent of efforts taken to isolate and contain the virus and whether they were satisfactory or whether they could have been improved;

   (f) existing legislative and regulatory provisions related to or that have implications for the isolation and containment of infectious diseases, including the quarantine of suspected carriers;

   (g) any suggested improvements to provincial legislation or regulations, and any submissions that the Province of Ontario should make concerning desirable amendments to federal legislation or regulations; and,

   (h) all other relevant matters that Mr. Justice Campbell considers necessary to ensure that the health of Ontarians is protected and promoted and that the risks posed by SARS and other communicable diseases are effectively managed in the future.

2. The investigation shall be conducted in a manner that does not impede ongoing efforts to isolate and contain SARS.

3. Mr. Justice Campbell may request any person to provide relevant information or records to him where he believes that the person has such information or records in his, hers or its possession or control.

4. Mr. Justice Campbell shall hold such public or private meetings as he deems advisable in the course of his investigation.

5. Mr. Justice Campbell shall conduct the investigation and make his report without expressing any conclusion or recommendation regarding the civil or criminal responsibility of any person or organization, without interfering in any ongoing criminal, civil or other legal proceedings, and without making any findings of fact with respect to civil or criminal responsibility of any person or organization.

6. Mr. Justice Campbell shall produce an interim report at his discretion and deliver it to the Minister of Health and Long-Term Care who shall make the report available to the public. Upon completion of his investigation, Mr. Justice Campbell shall deliver his final report containing his findings, conclusions and recommendations to Minister of Health and Long-Term Care who shall make such report available to the public.

7. To conduct his investigation Mr. Justice Campbell shall be provided with such resources as are required, and be authorized by the Attorney General and shall have the authority to engage lawyers, experts, research and other staff as he deems appropriate, at reasonable remuneration approved by the Ministry of the Attorney General.

8. The reports shall be prepared in a form appropriate for release to the public, pursuant to the *Freedom of Information and Protection of Privacy Act*.

9. These terms of reference shall be interpreted in a manner consistent with the limits of the constitutional jurisdiction of the Province of Ontario.

In the event that Mr. Justice Campbell is unable to carry out any individual term of his mandate, the remainder of these terms of reference shall continue to operate, it being the intention of the Minister of Health and Long-Term Care that the provisions of these terms of reference operate independently.

APPENDIX E: THE ECONOMIC IMPACT OF SARS

SARS inflicted untold pain and suffering on its victims, their families and friends. In all, 247 people in Ontario had probable cases of SARS and a further 128 had suspect cases. Forty-four people died of SARS. Up to 20,000 people may have been quarantined.[175]

But SARS also had economic consequences that affected everyone in Ontario. It is impossible to calculate the overall economic effect of SARS, including the personal financial toll on those whose families were struck or the toll on health workers and health care institution. The purpose of this appendix is simply to point to the magnitude of estimates of the overall costs of SARS.

Some experts have suggested it was fortunate that SARS hit the Greater Toronto Area, with its major teaching hospitals, world-renowned medical school and the largest local public health unit in the country. As the Naylor Report stated:

> Having the SARS outbreaks occur in Canada's largest city presented many challenges. However, it may have been fortuitous that SARS struck Toronto and not a less-advantaged region of the country. Few rural and small urban hospitals have resident specialists in infectious disease; infection control officers/nurses are often part-time, and include infection control among a number of somewhat unrelated functions such as nursing super-vision or occupational health.[176]

The corollary is that SARS also affected Ontario's, and indeed Canada's, most important single economic engine. The GTA, which some economists call the country's "primary economic locomotive," produces nearly 20 per cent of Canada's gross domestic product[177] and is home to about 40 per cent of Canada's corporate head offices.[178] If the GTA falters, the effects are felt not just in Ontario, but also in Canada as a whole.

Because the Ontario and national economies were also affected by the stronger Canadian dollar and the mad cow scare during the second quarter (from April to June) of 2003, federal and provincial experts caution that it is hard to pinpoint the precise impact of SARS.[179]

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[175] *SARS Commission Public Hearings*, September 29, 2003, p.82

[176] Naylor Report, p. 20.

[177] The standard measure of the overall size of the Canadian economy, gross domestic product is the market value of all goods and services produced in a year in Canada.

[178] TD Economics, *The Greater Toronto Area: Canada's Primary Economic Locomotive In Need of Repairs*, May 2002.

[179] Ontario Ministry of Finance, *Ontario Economic Accounts – Second Quarter of 2003*, (Toronto: November 2003). Statistics Canada, *The Daily*, (Ottawa: August 29, 2003)

The Ontario tourism industry which generates $18 billion in annual sales, about four per cent of Ontario's GDP, was badly affected by SARS. It employs over four hundred and eleven thousand employees, more than seven per cent of total provincial employment, and more than the construction or public administration sectors.[180]

In a presentation to the Commission, Terry Mundell, President and CEO of the Ontario Restaurant and Motel Association, stated:

> The immediate economic impact of the SARS outbreak was previously unimaginable. In areas of Toronto, the epicentre of the outbreak, restaurant sales and many establishments dropped 80 to 90 per cent overnight. With business and leisure travellers cancelling trips into Ontario, some hotels posted single digit occupancy rates … In April 2003, Ontario lost over twelve thousand (12,000) hospitality and tourism jobs … [In the] first half of 2003, visitors to Ontario dropped 17.9 per cent over the year previous which had also shown decline from 2001. By June of this year [i.e. 2003] international border crossings were down over 20 per cent. U.S. visitors [were] down over 20 per cent. International tourism revenues for the period of February to June of this year [i.e. 2003] were down a staggering $639 million, nearly 30 per cent below Ministry of Tourism forecast for that period.[181]

Other sectors were also affected. According to the Ministry of Finance:

> The SARS outbreak, which lasted from the end of March to mid-June, had a widespread impact on Ontario's economy …
>
> In addition to the decline in visitors, local residents curtailed their shopping and entertainment activities. The arts and entertainment sector in Ontario recorded growth of 1.6 per cent compared with 4.2 per cent in the rest of Canada. Retail activity fell 0.5 per cent even though grocery store sales rose as many people chose to substitute meals at home for restaurant outings.
>
> Production in the health and social services sector slipped 0.2 per cent in the second quarter. While the fight against SARS mobilized additional resources, this was more than offset by a drop in activity as many health care workers were placed on quarantine, and most non-emergency procedures were postponed.[182]

The Naylor Report also looked at the economic impact, stating:

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[180] *SARS Public Hearings*, November 18, 2003, pp. 85-6.

[181] *SARS Public Hearings*, November 18, 2003, pp. 85-6.

[182] Ontario Ministry of Finance, *Ontario Economic Accounts – Second Quarter of 2003* (Toronto: November 2003), p. 8.

> Estimates based on volumes of business compared to usual seasonal activities suggest that tourism sustained a $350 million loss, airport activity reduction cost $220 million, and non-tourism retail sales were down by $380 million. It seems entirely possible that the direct and indirect costs of SARS could reach $2 billion.[183]

As Table 1 illustrates, SARS also increased provincial spending. At the end of June 2003, the Ministry of Finance estimated that SARS had generated an estimated $1.073 billion in unforeseen expenditures in the 2003-4 fiscal year.[184]

Table 1 - Provincial Expenditure Impact of SARS 2003-4[185]	
Extraordinary Costs in the Health Sector	$395 million
Compensation for Health Care Workers	$330 million
Health Sector Short-Term Action Plan	$120 million
Ancillary Revenue Losses (hospitals and other health agencies)	$100 million
Compensation for Individuals	$10 million
Support for Municipalities and Volunteer Organizations	$10 million
Tourism Recovery Program	$84 million
Ontario Investment Attraction Program	$5 million
FitzGerald Infectious Diseases Network	$2 million
Other Extraordinary Costs	$17 million
Total	$1.073 billion

When Erik Peters, the former Provincial Auditor looked at the issue in October 2003, he estimated that SARS-related expenditures would total $720 million, of which $250 million would be recovered from Ottawa.[186]

The economic consequences of SARS contain an important lesson. They underline the vital importance of sufficiently funding public health, which according to the Association of Local Public Health Agencies, accounts for less than one per cent of provincial health spending.[187]

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[183] Naylor Report. p. 211.

[184] Ministry of Finance, *Ontario Finances – Quarterly Update-June 30, 2003*.

[185] Ministry of Finance, *Ontario Finances – Quarterly Update-June 30, 2003*.

[186] Erik Peters, *Report on the Review of the 2003-4 Fiscal Outlook* (October 29, 2003), p. 4

[187] Association of Local Public Health Agencies, *The Future of Public Health in Ontario* (November 2003), p.9

As one local Medical Officer of Health told the Commission:

> The public health system has always demonstrated a tremendous value for the expenditure of public funds. It is important to note that the Ontario public health system was funded at $40 per capita in 2003 …
>
> The public health system has delivered tremendous value, and has focused on the overall health priorities. The fact remains that it is a system that is substantially under-funded at a time when the illness care system monopolizes the provincial budget. As the Naylor panel pointed out, "… and, given the very small percentage of publicly funded health spending directed to public health functions, the levels of investment that would have a transformative effective on public health capacity are comparatively small – ranging by province from the tens of millions to the low hundreds of millions annually." Put another way, what does our society expect for $40 a person?

SARS proved that infectious disease, in addition to its human toll, can have a devastating effect on the economy. When the government considers the cost of public health reform in the overall competition for tax dollars, it should consider the potential cost of failure to invest in public protection against infectious disease. The expenditures required to provide effective protection against infectious disease are relatively small when compared to the overall cost of health care. A failure to invest in public health infrastructure and infectious disease control could be economically disastrous.